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CONTENTS

	PAGE
Editorial Notes	237
London & North Eastern Railway Company	239
Lord Royden Opens Fight Against Railway Nationalisation	240
British-Argentine Railways Commission	241
Standardising French Block Working	241
"Transitional Powers"	241
Letters to the Editor	242
The Scrap Heap	244
Overseas Railway Affairs—Western Australia, United States, South Africa, Kenya & Uganda, India, France	245
Design and Layout of Large Passenger Stations	247
"Liberation" Class Locomotives for France	248
U.S. Transportation Corps in Europe Graphically Portrayed	248
L.M.S.R. Experimental Prefabricated Station	253
Personal	255
London Midland & Scottish Railway Company Annual Meeting	258
News Articles	263
Notes and News	265
Official Notices	267
Stock Market and Table	268

DIESEL RAILWAY TRACTION SUPPLEMENT

The March issue of THE RAILWAY GAZETTE *Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price* 1*s.*

TO CALLERS AND TELEPHONERS

Until further notice our office hours are: Mondays to Fridays, 9.30 a.m. till 5.30 p.m.
The office is closed on Saturdays

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

New L.M.S.R. Chairman

AT the close of the London Midland & Scottish Railway Company annual meeting on Friday last, Lord Royden announced his intention to retire from the chairmanship of the company, and at a subsequent meeting of the board Sir Robert A. Burrows, who has been Deputy-Chairman since May, 1941, was appointed Chairman, and the Earl of Peel, Deputy-Chairman. Lord Royden's connection with the company dates back to 1909, when he became a director of the Lancashire & Yorkshire Railway, now merged in the L.M.S.R.; when the former company amalgamated with the London & North Western Railway in 1922, he became a director of the latter, and on the grouping of the railways in 1923, he went on to the board of the L.M.S.R. He became a deputy-chairman in 1940, and succeeded the late Lord Stamp as Chairman in May, 1941. In view of his long connection with the railway, it was fitting that he should open the fight against nationalisation of the railways in his speech, which is dealt with in some detail elsewhere. That battle will be strenuous, and Lord Royden has put wisdom before personal ambition in handing over the Chairmanship to a younger man. Sir Robert Burrows, who has been sole Deputy-Chairman since Lord Royden became Chairman, has important business interests in the coal mining industry, and therefore already has been in contact with the Government's nationalisation programme. He has, however, devoted a great deal of his energy and initiative to the furtherance of L.M.S.R. affairs, and has taken a very active part in its direction.

* * * *

Lord Portal on G.W.R. Plans

At the G.W.R. meeting on Wednesday, Lord Portal gave a reasoned argument against nationalisation and said that, if efficient service in national interest was to be the test, neither the record of the railway companies nor the experience of nationalisation of railways in other countries would justify the Government policy. A full report of Lord Portal's speech will be published in our next week's issue. Apart from his reference to nationalisation, in which he showed clearly some of the disabilities from the viewpoint of traders and the possibility that it might react unfavourably on the conciliation machinery dealing with railway staff matters, the Chairman pointed out that rising costs made it evident that the time was approaching rapidly when the Government would have to consider the raising of railway charges. As an example of the research work on which the G.W.R. was engaged, he instanced the fact that the company had under consideration plans for the construction of a gas-turbine locomotive based on experience obtained in connection with jet propulsion. The G.W.R. was very conscious that the punctuality of its trains left much to be desired and he explained the reasons, in general outside the control of the railway, which caused late running.

* * * *

Manufacturers Oppose Transport Nationalisation

The National Union of Manufacturers has sent a memorandum to the Minister of War Transport, advocating freedom of choice of transport by industry, and co-ordination of transport facilities, instead of nationalisation. It points out that the omission of coastwise shipping from the Government's transport nationalisation proposals is likely to give rise to difficulties, as this form of transport is often in direct competition with other agencies, and the railways and the coastwise liner companies have voluntary rate agreements. The four group railways already are linked by extensive pooling agreements and the memorandum doubts whether efficiency will be increased by bringing them into one huge body under State control. It suggests that there is a limit of size beyond which efficiency decreases, in view of the impossibility of detailed supervision and management. Although theoretically certain economies might be possible by an amalgamation of the existing railway units, beyond a certain size these economies often become illusory. The Union suggests that the continuation of some arrangement in peacetime, such as the linking together by the Railway Executive Committee during the war, would seem to offer greater advantages than State ownership. The real problem would not be solved by State control.

Engineering Industries and Exports

When Mr. John Wilmot, Minister of Supply & Aircraft Production, addressed the Engineering Industries Association on February 26, he stressed the responsibility which would fall on the engineering industries if this country was to achieve full employment and raise its standard of living. They would be called on to make a contribution significantly larger than they did before the war, and they would have to produce a proportionately larger part of the national wealth. The target increase over pre-war exports would have to be much larger than the 75 per cent. which applied to the general volume of exports. Mr. Wilmot declared that this would govern the Government's policy in relation to the engineering industries, but when he came to deal with the major difficulty with which those industries are faced—limited manpower—all he had to say was that the higher production would have to be provided by greater output from every man and the greatest use of any pockets of labour which might otherwise be underemployed. He urged a policy of sub-contracting work to any firms which might be underloaded. The Government machine tool disposal scheme contained opportunities for engineering firms to improve their equipment.

* * * *

British Railway Investments in Brazil

According to the compilation of statistics made each year by *The South American Journal*, the total British investment in Brazil at the end of 1945 was £221,094,796, on which £8,537,618, or 3.9 per cent. was received in interest. This compared with 3.8 per cent. for 1944. The amount of capital which received no interest last year was £27,718,241. The statistics relating to the British-owned railways of Brazil showed little change either as to total capital invested or to the interest paid. Capital at the end of 1945 is given as £30,726,662, and interest as £666,253, or 2.1 per cent., and the amount of capital which received no return was £18,532,336. At the end of 1944 the amount invested was £30,916,632 and on this interest at £667,848 also was equal to 2.1 per cent. The amount of unremunerated capital at that time was £17,638,536. Large increases were reported by the British owned railways in their gross earnings, but their working expenses also advanced substantially.

* * * *

Londonderry & Lough Swilly Railway

The report of the Londonderry & Lough Swilly Railway for 1945 shows that the improvement in rail traffic which last year permitted a dividend of 2 per cent. on the ordinary stock has been maintained, and this year the directors recommend a dividend of 5 per cent. Gross receipts from railway traffic were £56,840, an increase of £2,621, and expenditure was £72 down at £53,725. Merchandise traffic yielded gross receipts of £24,118, compared with £21,999 in 1944. The net railway receipts of £3,115 compare with £422 in 1944. Train-mileage increased from 123,451 to 126,765, but locomotive running expenses fell from £19,076 to £16,798. The company's locomotive stock consists of one tender engine and nine tank engines. Road transport activities, with which for many years it has been the company's policy to replace unprofitable railway mileage, earned net receipts of £18,989, against £11,408. The loss on motor vessel working was reduced from £102 to £63. Total receipts from all services were £187,255, and total expenditure £165,214. Payment of the 5 per cent. dividend on the ordinary stock will absorb £2,516, and £1,925 is carried to next year's accounts, comparing with £1,019 in 1944.

* * * *

The Ceylon Government Railway and the War

The importance of the naval base of Trincomalee during the war threw a heavy weight of traffic on to the Ceylon Government Railway branch line serving it. Though of 5 ft. 6 in. gauge, this line was constructed—and opened in 1927—only as a light railway, 44 miles long. The presence of S.E.A.C. headquarters at Kandy also necessitated the running of additional trains on the main line, including the "S.E.A.C. Special," a first- and second-class express with a fish van attached. This line, moreover, carried large numbers of troops to leave centres and hospitals in the hills. Additional civilian traffic, too, had to be catered for by the C.G.R., because of increased movement of coolie labour over the northern line to and from South India; this line, in fact, was taxed to capacity. The suburban section from Negombo, north of Colombo, to Panadure on the coast line southwards, also had to carry much of the traffic formerly handled by buses. The locomotives were worked very hard, as in most countries, and those working local trains and on shunting duties had to be fired with wood fuel.

* * * *

Mersey Railway Company

The report of the Mersey Railway Company for the year ended December 31, 1945, is again presented in the abbreviated form prescribed by the Minister of War Transport. Net revenue, after giving effect to the estimated operation of the financial arrangement with H.M. Government in respect of the control of the undertakings of railway companies and London Transport, is again shown as £109,976. The balance brought forward from the previous year is £3,617, making a total of £113,593. No appropriation is made to contingency fund this year. Interest on debenture stocks absorbs £56,143, leaving £57,450 available for dividends compared with £56,631 in 1944. A dividend of 3 per cent. is declared on the 3 per cent. perpetual preference stock, the same as last year, but the distribution on the consolidated ordinary stock is increased from 2⅜ per cent. to 2½ per cent., and will absorb £35,307 as compared with £33,542. The balance carried forward to 1946 is £2,671, as against £3,617 in the previous year. The ordinary dividend is the highest yet paid, the previous figure having been 2⅜ per cent. last year. Before the war the best ordinary dividend was the 1¼ per cent. paid for the year 1938.

* * * *

Postponing the Pullman Transfer

In order that the consortium of fifty American railways, which has been authorised by the U.S.A. District Court at Philadelphia to take over from the Pullman Company the operation of sleeping cars throughout the United States, may have adequate time to complete the financial procedure and to make arrangements for the transfer, the court has ordered Pullman to continue to run the cars until March 31, three months later than the date of the decree compelling the sale. This will also allow the Pullman Company time to arrange for the disposal of the modern lightweight Pullman sleeping cars in its stock to any of the railways that may desire to exercise their option to purchase. It is now revealed that the U.S.A. Justice Department, which initiated the anti-trust action against Pullman, favoured the sale of the assets to the financial group of Otis & Company, as being the only prospective purchaser which, in the Justice Department's view, would not perpetuate the sleeping car monopoly; also the Otis group had declared its intention of spending $500,000,000 every ten years on new cars. Nevertheless, the court refused to accept this recommendation, and declared in favour of the offer by the railways.

* * * *

An Experiment in Railway Station Design

From 1941 to 1943 various reports covering the technical requirements of railway station construction were prepared by Mr. W. H. Hamlyn, F.R.I.B.A., Architect to the L.M.S.R., and then the company decided to establish a Building Research Committee composed of members of the scientific, engineering, and medical professions, whose task it would be to examine the problem from their respective points of view. This was done, and as a result of their investigations an experimental station has been erected at Queen's Park, L.M.S.R., and forms the subject of an article on page 253 of this issue. Of prefabricated construction, the design is flexible to allow for increases or reductions in accommodation, and the materials used were selected bearing in mind the conditions of vibration and atmosphere met with on railways. A design capable of speedy erection was essential in order to minimise interference with traffic. The material to be used for the external walls was given special consideration. While it was decided on this occasion to use a granite aggregate panel for the base because this material can stand rough treatment, other types

of panel are under consideration for future use. For the walls above sill level vitreous enamelled iron panels were chosen. Windows are designed to fit flush with the external wall surface; this prevents accumulation of dust and dirt. The station was found to be economical to build, and further research is being carried out to test fuel efficiency, comfort conditions, etc., and the weathering and amount of cleaning necessary to maintain the external surface.

* * * *

Emergence from U.S.A. Railway Receivership

A steady reduction is being effected in the number of North American railways which are in receivership, chiefly since the depression years of the early 1930s. The latest available figures of the Bureau of Economics & Statistics, Interstate Commerce Commission, show 76 railways, 25 of them in the Class 1 category, and with a total mileage of 50,881, still in this position. This is 21.02 per cent. of all operated mileage in the United States, though it shows a substantial drop from the 27.68 per cent. at the end of 1942. One of the principal factors in the reduction of mileage in receivership has been the reorganisation and emergence of three large systems—the Chicago & North Western, the Minneapolis, St. Paul & Sault Ste. Marie, and the Western Pacific. Another important company, the Chicago, Milwaukee, St. Paul & Pacific, has completed successfully a reorganisation plan which has been under way for the past ten years, and the property returned to private ownership on December 1. The gross operating income of this company is now about $230,000,000 annually, and the net income in the region of $28,500,000 per annum.

* * * *

Colouring of Signal Arms

Mr. E. V. M. Powell, in a letter in our February 15 issue, described experiments he had made to improve the visibility of semaphore arms. Mr. Powell claimed that a central horizontal white stripe on the arm, adopted by the District Railway to distinguish its automatic signals (at first coloured plain red) from controlled ones, gives the best results. This view was taken in Bavaria and Austria-Hungary many years ago and those countries painted their semaphores in the manner described. Several styles of painting were experimented with in Germany, including dividing the arm in half horizontally, red over white. This style was favoured on part of the Prussian lines. The ball at the end of the arm, almost universal in Germany for many years, serves to accentuate the appearance of the signal. The present style of German painting incorporates a central white bar on the rectangular part of the arm. In the Netherlands, however, it has long been thought that plain red is the best colouring, save at very exceptional locations, for all signals, stop or distant, but there it is impossible to confuse the two in the "on" position.

* * * *

Forty Years of Articulated Locomotives

In our last week's issue we published an article describing the progress made in the development of articulated locomotive design on the Baltimore & Ohio Railroad during the forty years which have elapsed since its first 0-6-6-0 Mallet was delivered, and exhibited at the Louisiana Purchase Exposition at St. Louis, in 1904. This locomotive was in many ways a pioneer and the design at that time showed the proportions to which the Mallet type could be developed. Latterly, locomotive designers have practically abandoned the Mallet compound for simple expansion types; but the experience gained from the design and operation of these articulated locomotives has been put to good use in the development of the latest types; and the progress made in the use of superheating and of better materials and methods of construction has enabled an efficient type to be built. Much information can be obtained from the design of such locomotives, which, although developed for conditions differing materially from those in this country, represent American engineers' efforts to provide for a particular traffic where operating conditions are severe. Brief details were given of these 2-8-8-4 type locomotives in our July 14, 1944, issue. Making allowances for the progress in locomotive design and construction during the last forty years, it must be admitted that the 1904 design was a fine achievement.

London & North Eastern Railway Company

IN accordance with the requirements of the Ministry of War Transport, the financial accounts for the year ended December 31, 1945, are prepared in a condensed form again. The report states that the net expenditure on capital account for the year amounted to £753,545 and the net revenue, including £281,562 arising from reserves no longer required, was £11,027,813. The profit on realisation of investments was £30,258, and with the balance brought forward from the previous year of £81,479, the total available for appropriation was £11,139,550. After providing for all fixed charges, and the payment of dividends on the guaranteed stocks, the 4 per cent. first preference stock and the 5 per cent. redeemable preference stock (1955) and a payment of 2½ per cent. on the 4 per cent. second preference stock, making, with the interim of 1 per cent., 3½ per cent. for the year, there is a balance to be carried forward of £59,208. It is stated that the liability of the railways for war damage is still the subject of negotiation with the Government, and the company's liability has not yet been ascertained. There is a contingent liability in respect of the actuarial valuation of the L.N.E.R. superannuation fund and the annual provision recommended by the Actuary has been made. Of the superannuation and pension funds not consolidated in the L.N.E.R. superannuation fund, the report states that the annual provisions recommended by the Actuary also have been made, partly from revenue and partly from an existing reserve for superannuation liabilities. Dividend payments for the past 10 years are shown in the following table:—

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
	%	%	%	%	%	%	%	%	%	%
Pref. ord. 5% ...	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2nd pref. 4% ...	¼	1¼	Nil	¼	2	2¾	2¾	2¼	2¾	3½
1st pref. 4% ...	4	4	Nil	4	4	4	4	4	4	4
Red. pref. 5%...	5	5	Nil	5	5	5	5	5	5	5

The miscellaneous net receipts of £590,938 shown for 1945 include £536,622 (£476,939) dividends from associated bus companies. They also include £7,969 (£7,969) from Currie & Co. (Newcastle) Ltd. and £35,819 (£35,819) from Hay's Wharf Cartage Co. Ltd. Results of the whole undertaking for the past three years are summarised in the table which is given hereunder:—

	1943	1944	1945
	£	£	£
Total expenditure on capital account ...	360,902,642	360,758,490	361,512,035
Joint lines—Company's proportion net revenue	350,558	350,558	350,558
Miscellaneous receipts (net)	*528,651	*553,933	*581,585
Net revenue	10,655,441	10,750,279	10,746,251
Profit on realisation of investments ...	135,419	35,066	30,258
Appropriation to contingency fund ...	200,000	200,000	—
Reserves no longer required	—	—	281,562
Interest on loans and debenture stocks, etc.	4,210,137	4,207,887	4,205,187
Dividends on guaranteed and preference stocks	6,379,089	6,379,089	6,875,155
Balance after payment of preference dividends	1,634	1,369	22,271
Balance brought forward from previous year	78,476	80,110	81,479
Balance carried forward to subsequent year	80,110	81,479	59,208

* Other than those included in financial arrangements with Government

The directors state that contact has been maintained with representatives of the L.N.E.R. Stockholders' Association and the British Railway Stockholders' Union, and that the directors consider it to be more than ever necessary, at the present time, to have the support of organised stockholders' opinion. As a result of the operation of the demobilisation scheme, nearly 4,000 members of the company's staff returned from the Forces to railway employment in the second half of 1945. The number still serving at the end of the year was about 23,000. The directors record their appreciation of the efficient manner in which the staff has carried out its duties under the difficult conditions prevailing, and the report includes a statement of the awards or commendations to members of the staff. In March, 1945, comprehensive claims for increased rates of pay and improved conditions of service for railway employees were submitted by the railway trade unions. After negotiations between the Railway Executive Committee and the railway trade unions, agreement was reached on the main items. This provided for new standard rates of pay for conciliation grades and for increased rates

of pay of certain salaried staff, an increase in the war advance, concessions in respect of annual leave, higher pay for Sunday duty, and adjustments in the scales of pay for overtime and Sunday duty for salaried staff. Workshop staff also have been granted revised rates of pay, a guaranteed day and a guaranteed week, and also increased annual leave with pay.

* * * *

Lord Royden Opens Fight Against Railway Nationalisation

LORD ROYDEN'S speech to stockholders of the London Midland & Scottish Railway Company at the annual meeting last Friday, a report of which appears elsewhere in this issue, made clear the intention of the railways to oppose the nationalisation of the railways by all lawful means. Spokesmen of the stockholders at the meeting left no doubt that in doing so the companies would have behind them the support of the proprietors. Indeed, the only doubt expressed by the stockholders was whether the opposition contemplated by the railways would be sufficiently strong. One stockholder suggested that the £500,000 which the L.M.S.R. directors had brought into the revenue from the contingency fund might have been used as an anti-nationalisation fund, rather than in the payment of dividend.

Not only the nationalisation of the railways, but also the taking over by the State of the railway sponsored civil aviation services was criticised by Lord Royden. Of both he said that the reasons for the decisions appeared to be entirely political, and there was no suggestion that there had been any inefficiency in operation on the part of the railways. Lord Royden asserted, with complete confidence, that from the date of the formation of the London Midland & Scottish Railway Company in January, 1923, to the time when Parliament placed the railways under the control of the Minister of War Transport in September, 1939, the company had met in full all the obligations to the public placed on it by Parliament, and had shown great initiative, resource, and enterprise in the conduct of its affairs. Inasmuch as the railways were still without any knowledge of the Government's detailed proposals, he could deal only with the abstract question of purchase by the Government of the railways.

The Chairman quoted Mr. Herbert Morrison's speech at Toronto, when the Lord President of the Council said that it was the public interest that counted, and the real field for argument was how best the industry could be organised or managed, with a view to achieving this economic public advantage. He welcomed Mr. Morrison's declaration of policy that it was up to the nationalisers to prove their case that there would be public advantage by nationalisation, and said that it revealed a new outlook by the Government. He characterised as an extraordinary attitude of mind, and a wholly mistaken one, the line taken by Government utterances that as the electorate had returned a Socialist Government, it was the duty of all patriotic citizens to accept without criticism and without explanation the whole policy of the Government on nationalisation. It was the duty of the individual citizen to oppose the passing of any measure which he considered harmful to the interests of the State and he considered that it was in the public interest that the railways "should oppose it by all lawful means and we intend to do so."

Lord Royden gave in some detail the company's case for retaining the ownership and operation of the railways. In this connection the L.M.S.R. has prepared a booklet * which the Chairman commended to the stockholders. He recalled that Lord Leathers, when Minister of War Transport, had said that the railways were still the mainstay of the inland transport system of the country, and as such were an indispensable part of the military machine, and he also quoted tributes paid by Mr. Winston Churchill, then Prime Minister, and the heads of the Service Departments, on the occasion of the 21st anniversary of railway grouping. More recently he had received a letter from Mr. Ellis Hunter, of the British Iron & Steel Federation, which expressed appreciation of the manner in which traffic had been handled by the companies during the war period, and stating that notwithstanding the difficulties under which the railways had worked, no steel works had had to be shut down or seriously to curtail its output through lack of transport of raw materials. The Government had not shown what advantage would accrue to the users of the railways by the transfer of property. A study of conditions and results under national railway ownership overseas afforded no support to the assertion that national ownership was appropriate here.

The booklet is a record of what private enterprise has accomplished in the last 23 years. It shows that schemes in process of being worked out for introduction by the L.M.S.R. provide for a total expenditure of no less than £140,000,000, which is proof enough of the progressive outlook of the L.M.S.R. management.

The L.M.S.R. is the largest of the commercial undertakings in this country, the largest owner of hotels in Europe, a major unit in the road transport industry, and an employer of 250,000 persons. All main track components have been altered entirely during the lifetime of the L.M.S.R., which came into being 23 years ago, when 35 separate railway systems were amalgamated into one. In 1923 the company had 10,316 locomotives of many different designs, which fell into about 400 different classes. At the end of 1945 the stock had been reduced to 8,049 steam and 40 diesel locomotives comprising 133 classes. Of these 8,049 steam locomotives, 4,438 fell into the 17 classes which are the standard types of the company. With reduced numbers, however, the average daily mileage of each locomotive has increased between 1923 and 1938 by 30 per cent.

Of the total rolling stock at the end of 1945, no less than 67 per cent. in cost (or £119 millions) had been provided since amalgamation, which was the main reason why the stock stood up so well during the war. Between 1923 and 1938 the passenger train mileage was increased by 17 per cent. and whereas in 1923 no trains were timed at a start-to-stop speed of 60 m.p.h. or over, in 1933 there were five with a daily mileage of 730, and in 1939 there were 67 with a mileage of 6,900.

The booklet shows clearly that the benefits from the amalgamation in 1923, although they took years to realise, ultimately were achieved, and it shows, too, the many detailed steps, often costly and put into effect at a time when the railways were suffering severely from factors outside their control, which had to be taken to achieve results which were not fully appreciated until the railway had to stand the supreme test of wartime traffics. Certainly if any system is suggested in place of private enterprise, it needs to show that results at least as good as these will be obtained.

The launching of the railways' opposition to nationalisation is a welcome development, and from Lord Royden's speech it would appear that it is to be prosecuted in no half-hearted fashion. The only criticism—apart from the suggestion which has been made in several quarters that their case would have been strengthened if an alternative plan in detail had been put forward—is that so long has been allowed to elapse before the policy of the companies was made clear. The road haulage industry, for example, already has in full swing a vigorous campaign against nationalisation. Posters, advertisements, and educational propaganda of all kinds have been used widely to acquaint the public with the demerits of nationalisation of the road transport industry.

It is possible that under the present Government control of the railways, which has now been extended for at least another five years, the companies have not been permitted to incur expenditure on advertising, or other forms of protest, against the impending action by the Government. Under the present arrangements, the railways are working on Government account, their revenues and expenditures are pooled, and they are paid a fixed yearly rental for their services by the Exchequer. If it should transpire that because of this financial arrangement the railways have been unable to incur expenditure for appealing to the public against contemplated State control, it would provide a most unpleasant example of bureaucratic muzzling. It may not have occurred, but at least it seems strange that so long should have passed since the Government's intentions were clearly stated, without some energetic public protest by the railways.

* "A Record of Large-Scale Organisation and Management," obtainable free from the company

British-Argentine Railways Commission

THE progress made in the conversion to diesel traction of railways and the advantages of the diesel engine were the subject of comment by representatives of the British-owned railways in Argentina on their return to Buenos Aires recently after inspecting the most modern railway installations in the United States, Great Britain, and Europe. The Co-ordinator for Post-War Planning of British-Argentine Railways, Major R. K. Hubbard, who returned to Argentina after an absence of six months, together with Mr. K. N. Eckhard, Chief Electrical Engineer of the Central Argentina Railway, and Mr. P. W. Dobson, Sub-Chief Mechanical Engineer of the Buenos Ayres Great Southern and Western Railways, issued a statement on the subject of their investigations.

This stated that the investigations and inquiries carried out by the Commission during its six months' tour of the United States, Great Britain, Switzerland and France involved visits to many railways and factories and interviews with a large number of technical and operating representatives, and enabled the Commission to obtain first-hand information as to the trend in railway motive-power development from both technical and economic standpoints. The Commission also availed itself of the opportunity to obtain information as to other aspects of railway evolution. In respect of motive-power development, the progress in the dieselisation of railways in the United States of America was very striking during the war years, the advantages of the diesel engine as a means of increasing transport efficiency and capacity having been so clearly demonstrated that every effort was made to bring into service as many diesel units as possible to deal with the heavy movement of troops and war materials superimposed on a greatly inflated civilian demand for passenger and goods transport resulting from the country's gigantic war effort. "Air-conditioned passenger coaches with luxurious day and night accommodation, lunch counter buffets, cocktail bars, and the last word in passenger comfort and amenities are to become a standard feature of the United States railways," stated the Commission.

Electrified light-weight trains were being developed in Switzerland to cheapen and speed up passenger travel and the transport of goods in that mountainous country. It was the declared policy of the French railways to electrify up to 40 per cent. of their systems and to dieselise the remainder, "eliminating altogether the steam locomotive with its extravagance in fuel and other disadvantages."

The British-Argentine railways technical specifications for diesel-electric motive power have been reviewed with designers and operators in the United States, Great Britain and Switzerland, and proposals are coming forward from manufacturers to enable the cost of dieselisation to be studied. As this cost is expected to be extremely high, however, it is too early to make any statement as to what extent this method of traction could be adopted in Argentina, as this will depend on many factors.

* * * *

Standardising French Block Working

WHEN the French National Railways Company, or S.N.C.F. as it is commonly called in France, was formed to operate the separate main-line railway systems as a unified undertaking, the problem arose of harmonising the various operating rules and methods and elaborating a standard form which eventually could be applied throughout the system. The double-line block working arrangements varied considerably between the different railways. As in Great Britain, inventors had produced several types of apparatus, and the railways themselves had introduced their own modifications of these designs and applied them extensively. On some of the old Ouest main routes the block working was conducted entirely by telephone. This method was not satisfactory, and the lines in question were therefore selected for installation of the proposed new block working system.

There are several points of interest in the new system, which was described in an article in our issue last week. The aim is to provide a lock-and-block action with rail contact control, although the latter need not necessarily be employed everywhere, using for the most part apparatus readily obtainable at moderate prices. There are no block instruments in the ordinary sense, the controls being effected entirely by relays which may be housed wherever most convenient, the indications—there are only two, "all clear" or "train in section"—being shown on a panel provided with buttons for effecting the changes required. That the "normally clear" system of block should be selected as standard was to be expected, and it has been decided to have the signals standing normally "off," again conforming to the practice on the majority of the old lines.

The semaphore is still to be the distinctive signal for entering a manual block section outside station limits, and the practice of allowing a train to enter an occupied section under caution is retained, although it is not likely that it will be much resorted to. The semaphore is worked by an ordinary lever and is thus put to danger and cleared again by the signalman in rear, not set to clear automatically, as it is in the Lartigue block, by the signalman in advance clearing back. Similarly the mere putting to danger of the semaphore does not, as it does in that system, produce the "train in section" sign at the block post in advance; this has to be done by a separate action. Provision is made for securing what is in France called the continuity of the block (corresponding to "proving" in Great Britain), and this continuity can be interrupted to cover shunt and other similar movements by using special release equipment, suitably controlled.

There is a large amount of automatic signalling in use, and new work soon to be installed will, of course, result in the disappearance of manual block working from many important routes. It will still be necessary, however, to retain it over a considerable mileage. The existence of several different systems gives rise not only to difficulties in operation, but to increased costs for maintenance and renewals, and as some of the designs could not be adapted easily to modern requirements, such as operation on electrified sections, it appeared better to work out a new one on more or less independent lines, under which, however, the working of the traffic could continue on established principles.

* * * *

"Transitional Powers"

A GOOD example of the extent of the powers the Government has to control the economic life of the country, and the manner in which these may be added to or prolonged by Statutory Rules & Orders, was given in the House of Commons recently, when the Opposition moved to annul an Order in Council relating to the Control of Industry Statutory Rule & Order No. 1618 of last year. The Order is a direct outcome of the Supplies & Services (Transitional Powers) Act passed towards the end of last year; that measure was designed to enable certain Defence Regulations to be extended and applied to peacetime activities for a period of five years. Among these extensions is that relating to the control of the railways, which formerly were to be subject to control for a minimum period of a year after the end of the war.

As was pointed out in the House, the scope of the regulations in the latest Order covered the entire industry and trade of the country, and it gives the President of the Board of Trade or other competent Minister, powers by Order to provide for regulating or prohibiting the production, treatment, keeping, storage, movement, transport, distribution, disposal, acquisition, use or consumption of articles of any description, and in particular, for controlling the prices at which these articles might be sold. In fact, it gives the Government power to do anything it likes with any form of production distribution. One member suggested that if the Order passed through the House, he would not be at all surprised if members were told that the Government did not intend to pass any more Bills for nationalising any particular industry, because it would be unnecessary for it to do so.

The Order was passed through the House, as was inevitable in view of the majority possessed by the Government. The steamroller tactics which are used by the Government to crush opposition at the present time, not only must have the effect of discouraging the Opposition, but must detract from the value of the House of Commons in the preparation of legislation. There is room for wonder sometimes as to whether we are not approaching a stage which has been seen in other countries, at which all that may be necessary will be the calling together of members once or twice a year to hear the intentions of the Government.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Dunkirk Notes

Felden, Cold Knap,
Barry, Glam. February 19

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have read with interest the Dunkirk articles by "R.E." and "Another R.E.," and perhaps "Another R.E." will permit me to correct two points in his article, which appeared in your issue of February 15.

He states that two officers of the Transportation Directorate, B.E.F., were sent to Dunkirk, whereas three officers were in fact detailed to control the working of this Port—one Lt.-Col., R.E., and two Captains, R.E.

The intensive bombing of Mole No. 3 is mentioned as occurring about 11.0 a.m. on May 25, but it is my recollection that the particular air attack in question on the quay shed between Freycinets 7 & 8 was made about 8 a.m. on that day.

Yours faithfully,

S. STEVENS
Colonel (late R.E.)

Pilfering on Railways

20, Grove Place, Hampstead, N.W.3.
February 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have read the correspondence you have published on this subject, but up to the moment the only persons who should be able to suggest a solution to this serious problem, namely, Mr. Jesper, the L.N.E.R. Regional Chief of Police, and Mr. Kenneth Brown, have failed signally to do so.

Mr. Jesper has for some obscure reason only told us of his prowess with his gun amongst the Arabs, since when he has maintained a discreet silence. Mr. Kenneth Brown, in spite of, or perhaps because of, his great legal knowledge, simply indulges in nebulous quibbling.

Mr. Wallis has issued a direct challenge to both gentlemen to offer some practical suggestions, and I sincerely hope these will be forthcoming before the thieves in this country strip us of every possession.

Yours faithfully,

E. R. CAMP

[No doubt since writing the above letter our correspondent has seen the reply from Mr. McK. Jesper published in our March 1 issue.—ED. *R.G.*]

L.N.E.R. Locomotive Rebuilding

Peterhouse, Cambridge. December 5

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I am sorry to have taken up valuable space in your columns with arguments which Mr. W. J. Reynolds finds unconvincing. Before dealing with the points which he raises, I would hasten to add that I am far from being prejudiced against the Gresley locomotives, whose recorded performance is sufficient evidence of their quality, but I am not thereby prevented from realising that the designs are capable of development in the light of recent experience, and in view of the changing economic conditions in this country.

Mr. Reynolds underestimates the evidence available on the performance of Mr. Thompson's 2-cylinder locomotives. The first "B1" 4-6-0 has been in service for three years, of which some two years were spent at Gorton shed, during which time the locomotive worked in link with the "B17" 3-cylinder 4-6-0s on all the principal G.C. Section passenger turns. Other locomotives of the class (and later 8301 also) have been working on the G.E. Section, also alongside the "B17"s from five different sheds. Most of the first ten locomotives of the class have run a sufficient mileage for them to have received a general repair. The rebuild of Mr. Robinson's 4-cylinder 4-6-0, No. 6166, which is to all intents similar to the "B17" rebuild, also has worked on the G.C. Section for two years.

The "O1" 2-8-0, rebuilt from Mr. Robinson's famous class of that wheel arrangement, is sufficiently similar to the Gresley "O2" 3-cylinder 2-8-0 to be compared with that class, and here evidence is available from both the G.N. and G.E. sections, where the two classes have worked side by side. The "O1" is also by far the most numerous of Mr. Thompson's classes, numbering more than 30 locomotives.

Information on the "D49" rebuild is certainly scanty, but it is understood that this conversion was made at the end of some experiments with a new type of valve gear, when some extensive alterations to the locomotive were inevitable. The parts used were common to other classes, and the trials of the locomotive were not extensive, so that it is apparently not part of the general rebuilding scheme now developing.

It does not seem unreasonable to judge the respective merits of the 2- and 3-cylinder 4-6-0s from the evidence of the above-mentioned running, and despite Mr. Reynolds' objection, I still think that the unanimous opinion which I have found amongst the staffs of several locomotive depots is significant. Mr. Reynolds asks how we may expect to compare a "wartime utility locomotive of mixed-traffic category with a high-speed express passenger design." The answer is that the recorded performance of the "B1" 4-6-0 is such as to enable this comparison to be made, and furthermore with no disadvantage to that class. On the G.C. Section, as on the G.E., its performance has been consistently up to or above the standard of that of the "B17," and it has also established a very good reputation for riding qualities and fuel consumption. My evidence comes partly from friends who have witnessed the work of these locomotives from the footplate, in the course of their duties, but if sufficient conflicting evidence can be produced, I am prepared to modify my conclusions.

Were the only requirement of the locomotive working the 2.32 a.m. newspaper train from Marylebone an ability to attain a speed of 90 m.p.h. down gradients of 1 in 105-176, then I would agree that the "B17" and its 2-cylinder rebuild might enjoy some advantage over the "B1." However, as the working of this train also involved a considerable amount of hard pulling *up* gradients of the same order, at much lower speeds, it is certain that the "B1" would be equal to the task, a fact which was borne out by its performance on that line.

Individual locos of this class may have shown a tendency to falling power output when notched beyond the 25 per cent. mark on the indicator, but if Mr. Reynolds will inspect the cut-off indicator on one of these alleged "black sheep," he may find (as I did) that an adjustment of the indicator plate would rectify this anomaly (and, incidentally, ensure that the locomotive is really in mid-gear when the indicator says that it is). The first "B17" rebuild, No. 2871, has shown itself able to maintain speeds of 70 m.p.h. with 400 tons down gradients little more favourable than dead level, whilst working at 5 per cent. cut-off (indicator checked!). This suggests that there is no inherent weakness in the valve gear, and indeed, this is only to be expected, as the valve gear fitted to these locomotives differs from that of the Gresley locomotives only in having its travel increased to give a maximum cut-off of 75 per cent. instead of 65 per cent.

In suggesting that the 2-cylinder locomotives will run smoothly only when new, Mr. Reynolds is treading on delicate ground, for it is well known that the Gresley 4-6-0, 4-4-0 and 2-6-0 locomotives have the reputation of being amongst the roughest locomotives in the country, whilst experience with the "B1"s, when they are nearly due for shopping, shows that their riding qualities do not deteriorate appreciably with mileage. From the performance of the "B1" and "B17" 4-6-0s it is evident that the design of the bogie and its springing is of much greater importance in determining the riding qualities of a locomotive than the number of cylinders.

The fact that the Gresley locomotives have performed well (and very well) in the past is not conclusive evidence against their being modified in the future. The earliest Pacifics and 3-cylinder 2-6-0s are now from 23 to 25 years old, and this, combined with their unduly rapid deterioration during the war, means that to retain them in their present condition would involve renewals of parts on a scale by no means incomparable with that involved in renewing the locomotives to a modified design. This is no new conception in British locomotive practice, but one that has long been common on many railways.

The Gresley conjugate valve gear may have given satisfaction in the past, but wartime experience has shown that it will deteriorate much more rapidly than the outside valve gears of the same locomotives, or the inside valve gears of conventional 3-cylinder locomotives. This means that to keep it in first class condition it is likely to need more attention than a separate gear. The weaknesses of the gear have often been shown in the past by the number of middle cylinder failures on the Pacifics which could be attributed to incorrect valve events, and also in the attempt to forestall overheating of the inside big-end by the use of detectors, or "stink bombs." It is interesting to note that of the several railways in different parts of the world which have tried conjugate valve gears for 3-cylinder locomotives (in some cases the Gresley gear itself), the L.N.E.R. is the only one on which the gear was adopted as standard.

The theoretical advantages of the 3-cylinder locomotive may be "unquestionable," but the practical disadvantages of the third cylinder are also beyond question. It is unfortunately a sign of the times that theoretical advantages must also be economically justifiable, both on privately and State-owned

railways. Hence no locomotive engineer can afford to overlook any detail of design which will add to the difficulty (and thus to the cost) of maintaining his locomotives.

In answer to Mr. Reynolds' last query, I would suggest that better than either of his alternatives is a locomotive which is first class in performance, and needs little maintenance to keep it in proper condition. This will indeed be a psychological tonic to shed and footplate staff alike, but will not be found by the incorporation of unnecessary refinements.

Yours faithfully,
ARTHUR F. COOK

Locomotive Renumbering

6, Armitage Road, Birkby,
Huddersfield, February 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The costly action of the L.N.E.R. in proceeding to alter the numbers of all its locomotives is of interest to those in charge of considerable numbers of machines, buildings, books or any other things distinguished by numbers, because it raises the question as to what is the precise advantage of one method of numbering over another.

The L.N.W.R. adopted the policy of giving each new engine, regardless of class, the lowest vacant number, the idea presumably being to minimise the use of four-figure numbers and thus to keep down the cost of number plates and of marking components.

At the other extreme, the G.W.R. gave all standard classes four-figure numbers, and engines of each class took numbers in certain series. Although this gives one a vague impression of being more orderly, one looks in vain for any definable practical advantage and one certainly finds nothing comparable with the economic value of the other scheme.

If the L.N.E.R. re-numbering has any tangible justification, those concerned with numbering schemes in general would no doubt be glad to hear of it. At the moment it appears to be merely a method by which the engines themselves (without any change that might spoil them) remind us that Sir Nigel Gresley is no longer with the L.N.E.R. Whether this result is thought to be obtained cheaply depends on the viewpoint.

Yours faithfully,
R. HOWARD

Recent Locomotive Designs

Montevideo. February 14

TO THE EDITOR OF THE RAILWAY GAZETTE

Sir,—I have read with considerable interest the letter from your correspondent, Mr. P. C. Dewhurst, published in *The Railway Gazette* of January 4, in which he confirms that the figures relating to evaporative H.S. given in his article describing the Central Uruguay Railway 2-10-0 proposed design, were erroneous—stated to be due to some "telescopic action" in their preparation for the press, which had incidentally increased by some 26 per cent.

As a result of the foregoing clarification, it may now be confirmed that the "pull-speed" curves as shown in the article in *The Railway Gazette* of September 7, 1945, do represent what they were originally intended to do, namely, a survey of the basic features of three recent locomotive designs along the lines of American standards as used by the Baldwin Locomotive Works, and described by Mr. Ralph K. Johnson, its Chief Engineer, a well-known authority on American locomotive practice. Therefore the writer cannot accept the honour bestowed upon him, in Mr. Dewhurst's frequent references to the methods used.

Your correspondent goes to some considerable length in his disapproval of the results found, and finally suggests that the writer "seems to be losing sight of practical considerations; the common pitfall of over-simplification in methods or machinery, or even statements as in this case." However that may be, the answers to most of his remarks are to be found in the writer's letter published in *The Railway Gazette* of November 23.

Mr. Dewhurst disapproves of the introduction of grate area into these considerations, where, as he now states "no grate exists"; yet in his article of March 9, 1945, the grate area prominently figures as being 30 sq. ft. It is also of interest to note that the boilers of the C.U.R. proposed engines are to be interchangeable with boilers for an existing 2-8-0 class, and the writer suggests that the width of the firebox—hence the grate area—was not so much an intentional accomplishment, but is the maximum which can be obtained between the plate frames of a 4 ft. 8½ in. gauge engine, as may be calculated from the grate area and the length of firebox given in the diagram.

It is evident that Mr. Dewhurst has lost sight of the fact that the rated tractive effort of the C.U.R. proposed design is much greater than that of the "austerities," when he makes the most enlightening remark that the C.U.R. locomotive "could handle a weight of train which neither of the 'austerities' could even start," a remark which should be relegated to "the losing sight of practical considerations," and so on.

Your correspondent also make reference to the "advantage of greater starting power and lower-speed hauling capacity of the C.U.R. design—of prime importance for its intended operating traffic conditions"; and it may be seen that such desired conditions of operation are clearly demonstrated on the pull-speed curve for the C.U.R. design, and evidently fulfil the requirements, although it should be remembered that the "rated tractive force" of a locomotive is of no value except at starting speeds; also that "ton-miles per hour" is the direct measure of revenue earning capacity—a measure which is clearly shown to advantage in the austerity engines over that of the C.U.R. proposed design, relative to their respective rated tractive efforts.—Yours faithfully,

THOMPSON FAIRLESS

The Running Man's Ideal Locomotive

Economical Boiler Washing Co. Ltd.,
12, Ashley Place, Westminster, S.W.1
February 25

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have read with much interest the summary of the paper by Colonel Topham on "The Running Man's Ideal Locomotive" which appeared in *The Railway Gazette* of January 25, the summary of discussion, and the correspondence which has been published in subsequent issues. As a layman who has quite a lot to do with locomotives, I would like to add my quota of suggestions, writing as one interested in the washing out of locomotive boilers with hot water.

With regard to the blow-off cock, this is often placed under the boiler barrel; this is a bad position as it is not possible to blow out the sludge and so on from the firebox water spaces, where a lot of sludge accumulates. The ideal position for the blow-off cock is at the bottom of the firebox ring, either right- or left-hand side, where it is easy to get at and where the blow-off hose can be readily fixed. In this position, when blowing-out the boiler for hot water washing out, the sludge and other matter that accumulates round the firebox ring is readily disposed of.

Referring to washout plugs, some of these are placed in such positions that it is difficult to operate the washout nozzle for satisfactory washout. It would appear that it is very necessary for more co-operation between designers and the running department, so that items such as these can be satisfactorily arranged.

Yours faithfully,
E. J. H. SOUTH,
Chief Engineer

390, Wakefield Road,
Huddersfield, February 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I was most interested to read Mr. Slee's excellent letter on this subject and specially to note his pleas for some features that one might reasonably have expected to be universal already. The fact is, however, that some useful footplate arrangements that have been used in the past have been discarded by later designers solely (it would seem) to suppress their predecessor's good ideas.

For example, L.N.W.R. water gauges had black and white striped back plates which, when viewed through the glass, left no doubt whatever as to whether a glass with no visible water level was full or empty. Also, in the event of breakage of a gauge glass and failure of the ball valves, both upper and lower cocks could be closed simultaneously by turning a handle close to the cab-side, well away from issuing steam and water.

Mr. Slee's mention of the desirability of a cab floor covering the gap between engine and tender without the use of a hinged plate is specially interesting because that construction is used on Continental locomotives and is frequently mentioned in the British technical press as one of those things that they do better in France. Actually (and this does not seem to be widely known) it is a feature of all tender engines of Great Eastern design. Furthermore, it is provided on those L.N.E.R. "Sandringhams" that have G.E.R. type tenders, and yet it is not used on any other locomotives of L.N.E.R. design.

I have sometimes wondered whether it would be worth while to provide a linkage for turning on the blower at the moment the regulator is shut in order to guard against blow-back of flame into the cab, but there are certainly other and simpler improvements that could claim higher priority.

Yours faithfully,
W. A. TUPLIN

The Scrap Heap

PROFESSOR JOAD ON RAILWAYS

The February issue of *The Great Western Railway Magazine* not only reprints certain comments by Dr. C. E. M. Joad, it also takes up the points he makes. Below is the relative extract:—

The familiar and agreeable countenance of Professor Joad is accustomed to grace the head of a weekly column in the *Sunday Dispatch*, wherein the well-known "Brains Truster" offers answers to questions of popular interest. On January 13, railways were accorded a commentary, in answer to the query:—

"Do you think the recent series of railway accidents means the railways have become unsafe as a mode of travel and should be superseded as soon as possible?"

Certainly not, opined Professor Joad. They were as safe as houses—safer, since men started to drop bombs from above—and infinitely safer than cars. In the recent sequence of railway accidents—the worst for years— deaths had totalled thirty-three. On the roads the average death-roll was five hundred and forty a month—a hundred and thirty-five a week. So cars, in an average week, were about four times as dangerous as railways in the latter's worst.

When railways were freed of rolling stock that was obsolete, and had restored full line maintenance, and when four or five times as many cars were on the roads, the disparity would be infinitely greater.

Superseded as a mode of travel? Certainly not, again said the Professor. Before the war he had looked forward to travelling on trains—free to eat, drink, read, write, sleep or talk at will. In a car, food and drink got jerked all over the place; talk was in snatches; thinking, reading and sleeping were ruled out, and journey's end found one "very cross, very cold, all liver and no legs."

Then, however, came a twist in the tail of Mr. Joad's observations—even a sting in it. He wound up:—

"Let me not, however, conclude this answer without pointing out that the railways are not only very bad, but much worse than they might be, owing to complacent inefficiency on the part of their staffs, who have got so used to trains being late that they take it for granted that trains should be late; so used to supposing that travellers' convenience is of no importance that they take it for granted that they should be inconvenienced—and don't care a damn."

Readers may feel that Professor Joad may have reason for complaining in a general way, of travel conditions on the railway; but his charges, so far as they affect the Great Western Railway at any rate, seem to require substantiation. Is there any reasonable ground for saying:—

That the G.W.R. is much worse than it might be?

That there is complacency as well as inefficiency?

That staff take it for granted that trains should be late?

That staff are indifferent to passengers' discomfort?

It must be accepted, of course, that Professor Joad is sincere in his statements, and really believes them to be true. We know he is not the only passenger who believes these things. What causes passengers to draw such conclusions? Few, of course, understand the serious shortages and other handicaps under which we are working, but is this the whole story? Is there anything else in it besides the lack of proper understanding?

Station and train staffs are the eyes and ears of a railway. We invite them to give their own impressions of the reasons why passengers are liable to pass such harsh judgments, not only on their work but on the spirit in which they do it.

* * *

100 YEARS AGO

From THE RAILWAY TIMES, *March 7*, 1846

CALEDONIAN RAILWAY.—The second ordinary half-yearly meeting of the shareholders was held in the 'Royal Hotel, Edinburgh, on Wednesday, the 25th day of February, 1846.

In the absence of the Chairman, JOHN HOULDSWORTH, Esq., of Cranstown Hill, one of the Directors, was requested to take the chair.

The Chairman desired the Secretary to read the advertisement giving notice of the meeting, and the Secretary read the same from the *Scottish Railway Gazette*, of the 31st ultimo.

The Chairman desired the Secretary to affix the common seal to the Register of Shareholders, and the seal was affixed accordingly.

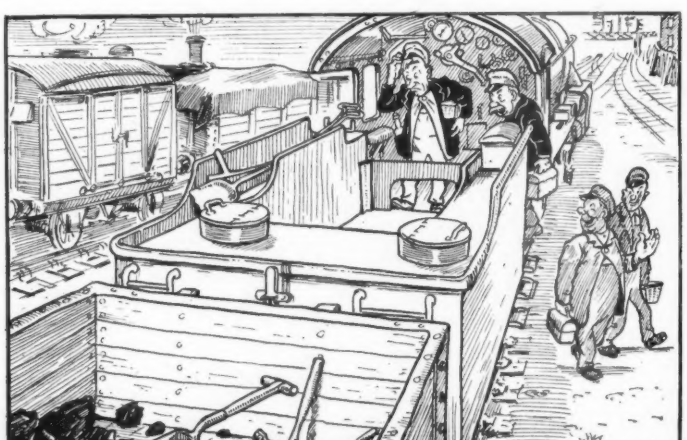
The Chairman desired the Secretary to read the Report by the Directors and the Report by the Engineers, and the Secretary read the same.

It was moved by the Chairman, and seconded by Charles M. Barstow, Esq., and resolved unanimously—

That the Report of the Directors be approved and adopted, and be published in such newspapers as the Directors may determine.

The Chairman having left the chair, Mr. Blackadder moved a vote of thanks for his conduct of the proceedings, which was carried by acclamation.

(Signed) JOHN HOULDSWORTH, Chairman.



"Cheerio, mate, you'll find her a shade heavy on coal"

RAILWAY QUESTIONS AND ANSWERS

Statement: Railways owned or controlled by the State are a success wherever they have been tried.

Answer: Of the railway mileage of the world 53 per cent is State-owned. But only a small percentage of the State-owned railways is self-supporting; in quite a number of cases the working expenditure actually exceeds the gross receipts without making any allowance at all for interest on capital. For example, in 1938 there was a deficit of 7,600 million francs on the working of the French National Railway Company, a loss which the French Treasury had to make good. Out of the 41 State-owned railway systems (counting the several systems in China, Australia, and Spain individually) only 12 showed a surplus on the year's working for 1938. In Russia, France, Japan, Germany, and Italy railways were constructed largely from a strategic point of view and in Germany the cost of the great *autobahn* was financed by a subsidiary company of the Reichbahn, and could only, therefore, be paid for by the taxpayer. All serious students of railways agree that, whether State-owned or privately-owned, railways must cover their costs and interest on capital, and at the same time earn a surplus for development. In other words, they must be self-supporting. From the figures quoted above it will be seen that only 29 per cent. of all State-owned railways of the world fulfil this requirement—hardly confirmation of the statement that "State-owned railways are a success wherever they have been tried." If there are losses on railways owned by stockholders, the stockholders stand these losses; if there are losses on State-owned railways, these must come out of the pockets of the taxpayer.—*From "Answers to Questions and Statements," issued by the British Main-Line Railway Companies, 22, Palace Chambers, London, S.W.1.*

* * *

RAIL DEPOT BUILT IN FOUR DAYS

During the war, at Newcourt, a few miles from Exeter, a "rush-hush job" was put in hand and completed in a few days by the Southern Railway for the United States Navy. The Americans decided to establish a very large naval stores depot at Newcourt. This depot, known officially as the United States Naval Amphibious Supply Base, required a large number of railway sidings, which from start to finish were completed in four days. Within 48 hours 1,200 ft. of sidings appeared, and on the fourth day the whole of the siding accommodation, complete with signalling, was in use. Between October, 1943, when the depot was built, and November, 1945, 24,195 railway wagons were dealt with there.

* * *

OPERATING ODES

The Ideal Stationmaster

With braid of gold on cap of blue,
With polished shoes and buttons too,
With trousers always creased like new;
HE is the stationmaster.

Though helping granny to alight,
Though putting erring traveller's right,
Though sorting parcels every night;
He IS the stationmaster.

And should emergencies arise,
And should the worst materialise,
Or should staff ask for counsel wise;
He is THE stationmaster.

When snow and ice encase the ground,
When tempests rage or fogs abound,
When trains are late, he's ever found;
He is the STATIONmaster.

Alone among the noisy crowd,
Alone 'midst din and clatter loud,
Alone, with pensive head unbowed;
He is the stationMASTER.

H.W.W.

OVERSEAS RAILWAY AFFAIRS

(From our own correspondents)

WESTERN AUSTRALIA

Financial Results

The financial results for the quarter ended December 31, 1945, and the first half of the current financial year, compared with the preceding year, are set out below:—

	Three months ended December 31		Six months ended December 31	
	1945	1944	1945	1944
	£	£	£	£
Earnings	1,044,700	1,111,500	2,006,200	2,219,100
Working expenses	1,035,363	925,231	1,998,264	1,855,199
Net revenue	9,337	186,269	7,936	363,901
Interest	260,000	261,300	523,500	522,600
Loss ...	250,663	75,031	515,564	158,699

The loss of £250,663 for the quarter and £515,564 for the half year reflects the falling off of defence traffic since the end of hostilities. Although the haulage capacity has been taken up with other traffic, this has been of a lower-freighted category, as, for example, wheat and other primary produce; also, the tonnage of fertilisers railed to the country has increased. There has therefore been no corresponding drop in working expenses; in fact, these have increased, and increased costs during the war years over which the Department had no control, but which are still effective despite the reduction of earnings, will have an increasingly deleterious effect on the financial results as the preponderance of lower-freighted traffic increases.

Earning capacity was also hampered during the quarter by short supplies of coal, and although it was hoped that with the cessation of hostilities the shortages experienced in recent years would disappear, relief has not yet accrued. The percentage of working expenses to earnings was 99.11 as compared with 3.24 per cent. for the corresponding quarter of 1944. The return of net revenue on capital was 0.14 per cent., compared with 2.85 per cent. in 1944. Train mileage for the quarter totalled 1,579,946, a slight increase as compared with the 1944 quarter, when the train-mileage figure was 1,578,492.

Goods Train on Fire

On February 6 a fire on a goods train dislocated all main rail services between Perth and Spencers Brook on the main Eastern Railway. When the train—No. 108 Goods ex-Northam—was passing through Wundowie, it was noticed that the trucks of chaff were burning. The train was stopped and the burning trucks pulled ahead. The absence of fire-fighting facilities at this point prevented any action to quell the flames, and the fire had to be left to burn itself out. As a result of the fire, both up and down lines between Koojedda and Wooroloo were closed to traffic temporarily, due to the danger created by the blazing trucks. Four bogie trucks and their contents were totally destroyed. The cause of the fire is unknown.

Derailment near Carbarup

On December 19 eight trucks and a van attached to No. 10 fast goods were derailed near Carbarup on the Great Southern Railway. The track was badly torn up, resulting in the vehicles piling up and being heavily damaged. A number of rails was crippled and sleepers broken for approximately 200 ft. Of the wagons, one was damaged beyond repair, while the others suffered damage to varying degrees.

The train, of 16 vehicles, included several bogie vans loaded with carcases of meat from the Albany Freezing Works. The accident is attributed to excessive speed setting up undue oscillation in the meat vans, causing one of the vans to mount the rail. Damage to the contents of the derailed vehicles was extensive and serious delays occurred to perishable traffic. Approximately 300 carcases of mutton from one van, which were strewn about the ground, were destroyed. The driver has been charged with allowing the train to attain a speed in excess of the safety limit laid down.

UNITED STATES

Locomotives for Overseas

At the end of 1945 the American Locomotive Company had on order 558 locomotives of various types for overseas export. Up to November 30, 1945, the company had shipped 421 locomotives abroad, including 22 for Portugal, which were the first ever to be built for that country in the Western Hemisphere. Other countries which have placed orders with the company are France, India, Belgium, Brazil, Mexico, Cuba, Jamaica, and Honduras. The locomotives for France are of the 2-8-2 "Liberation" class, of which 260 were ordered from the company by the French Government in March, 1945, and a further 160 in December. The French orders, totalling 1,100 locomotives of this class to be built in the United States, have been distributed between the American Locomotive Company, the Baldwin Locomotive Works, and the Lima Locomotive Works.

B. & O. Streamline Trains

The Baltimore & Ohio Railroad has ordered from the Pullman-Standard Car Manufacturing Company two eight-car trains of streamline lightweight stock for daytime service between Baltimore, Washington, Pittsburgh, and Chicago. The accommodation will be all-coach (equivalent of third class) and each train will consist of a buffet-lounge car, four coaches, a two-level coach with a dome observation section on the upper level, a dining car, and observation car. Radio and public address facilities will be provided throughout the train. Most of the seating will be of the reclining type, but movable lounge chairs will be provided in the smoking sections at each end of the four coaches, and the rear observation car will be furnished with chairs and settees, and will have a tavern lounge section at one end.

New Stock for N.Y.C. Expresses

An order for 420 vehicles for passenger train service recently placed by the New York Central System is said to be the largest ever made by an American railway, totalling $34 million. It comprises 200 sleeping cars to be built by the Pullman-Standard Car Manufacturing Company, 112 sleeping cars to be built by the Edward G. Budd Manufacturing Company, and 108 baggage, baggage-mail and railway post office cars to be built by the American Car and Foundry Company. All vehicles will be streamlined, and are to be used in various N.Y.C. named expresses, including the "Twentieth Century Limited." The appointments of the sleeping cars will be based on suggestions made by passengers in response to a questionnaire distributed on the principal trains during the war.

SOUTH AFRICA

October Results

The working of the railways, harbours, steamships and airways for October, 1945, resulted in a deficit of £39,114, as compared with a deficit of £279,285 in September, £226,656 in August, and £274,121 in July. Compared with October, 1944, revenue from all sources advanced by £447,100, due principally to increased goods and coal traffic and improved receipts from catering, bedding, and road motor services. Expenditure increased by £586,851 because of higher maintenance, traffic, and operating costs, and cost of living allowance payments. The accumulated deficit for the seven months ended October, 1945, was £1,460,939, which is £954,288 more than that recorded for the corresponding period of last year.

Record Traffics in December

Last year ended on a record note for the South African Railways, with the first two weeks in December setting the pace for the month. The week ended December 1 saw earnings rise to a new peak of £1,092,731, but this record stood for only seven days, as in the week ended December 8 a new record of £1,141,718 was established. The highest pre-war figure was £714,588 in the week ended October 10, 1938. A new passenger record of £374,710 was set up in the first week of December. It exceeded the previous highest of £355,412 in the week ended October 6, 1945, by £19,308, and the highest pre-war total of £176,556 by £198,154.

The present goods traffic revenue record (excluding coal and livestock) is £621,236, dating back to September 1, 1945, nearly £16,000 more than the previous record and £149,271 more than the pre-war highest total of £472,965, recorded in the week ended October 16, 1937. Goods traffic yielded £578,526 in the first week of December.

Railway Plans at Port Elizabeth

The building of a new station at Port Elizabeth might be delayed for some months if the City Council adhered to its proposals for foreshore reclamation, said Mr. W. Marshall Clark, General Manager of Railways, in an interview at Port Elizabeth. The railways' plans for a new station were far advanced. Any reclamation would mean an alteration of the present proposals. If the council was willing to bear the cost of the reclamation scheme, then the Administration would be prepared to consider adjustment of its plans to fit in with the arrangements.

The transfer of the locomotive sheds from the north end to Sydenham would be the first step in the expansion of the railway facilities in Port Elizabeth. The railways had plans for a new marshalling shed at New Brighton, and this would involve two or three years' work. The schemes for the city would probably cost upward of £1,000,000.

Wagon Building

There was still an acute shortage of railway wagons, Mr. Marshall Clark continued. There were 1,000 being built at Germiston and a very high standard of work was being turned out. Tenders had been called for 4,500 trucks to be built

in the Union in the hope of encouraging South African industry. It was expected that the workshops at Uitenhage would assemble the next batch of 1,000 wagons which would arrive from Canada within a few months.

KENYA & UGANDA

Sparks from Engines Cause Fires

At this time of year in East Africa, after several months of dry weather, it is usual to experience a marked increase in the number of fires in wagons, particularly on sections of the line where wood fuel has to be used; these occur even in all-steel covered wagons. During 1945, 217 fires in wagons were reported. Although spark arrestors are fitted to all locomotives, the fires are mostly caused by sparks from the engine. During January and February of last year there were 62 cases of fires in wagons, compared with 47 up to February 13 of the present year. Grass fires, too, become more frequent as sparks fall on the parched countryside. In 1945 there were 193 grass fires reported along the lineside, of which 107 occurred in the months of January and February. To February 13 of the present year, 60 such fires had been reported. While in most cases no serious damage is done, pasture land and crops are frequently destroyed.

Nairobi—Nakuru Re-alignment

A project for regrading the main line between Nairobi and Nakuru in order to eliminate the 2 per cent. uncompensated grades and substitute 1·18 per cent. compensated grades against down traffic and 1·5 per cent. compensated grades against up traffic, was accepted in principle before the war; construction of the earthworks in one section was begun in 1938 and completed in 1940. All further action was postponed because of the war, but it is now being brought forward as a first priority in post-war reconstruction. The project includes a re-alignment of the line between Nairobi and Uplands (31 miles) which will lengthen the line by 5 miles; it also envisages a shortening of the line between Gilgil (82 miles from Nairobi) and Nakuru (122 miles from Nairobi) by 13½ miles, for which a sound economic case can be made. There is likely to be vigorous opposition to the latter proposal from the farmers affected by the removal of the line. An alternative suggestion in regard to the Gilgil—Nakuru section, not supported by the Railway Administration, is to carry out the regrading of the line on its existing alignment.

The necessity for an immediate decision has been forced on the Administration by the need to replace the old 50-lb. track on the Nanyuki branch, and to strengthen the main line west of Nakuru by increasing the number of sleepers per rail. It is proposed to provide the material for these works from the track lifted from the Nairobi—Nakuru section, and to re-lay that portion of the main line with 80-lb. track, so that the whole section from Mombasa to Nakuru (451 miles) will be composed of 80-lb. track.

INDIA

Railways Works Programme

The provision of Rs. 2 crores for the construction of new lines and the restoration of lines dismantled during the war, and an open line works programme estimated to cost Rs. 48.84 crores during 1946-47, were among the items considered by the newly elected Standing Finance Committee for Railways, which met on January 26 and 27 under the chairmanship of Mr. A. C. Turner, Financial Commissioner of Railways. The question of deciding which particular lines are to be constructed was left to the Railway Board. The Cawnpore—Khairada section of the G.I.P.R., which was dismantled during the war, is to be restored. The open line works programme for 1946-47 was sanctioned.

The committee approved of the Government's proposal to purchase the Ahmedabad—Prantaj, and the Mandra—Bhaun (branch of N.W.R. near Rawalpindi) railways, and the purchase of machinery required for remodelling the Kanchrapara locomotive workshops for building locomotives; and further sanctioned a sum of Rs. 2 crores spread over a period of 3 or 4 years for removing infringements on the Bhore and Thull Ghats on the G.I.P.R. The Railway Board's proposal to create some permanent posts of deputy heads of departments was also approved by the committee.

The committee was informed of the latest position of railway revenues and working expenses. The total gross earnings of budget lines from April 1, 1945, to January 10, 1946, amounted to Rs. 170.47 crores, which is Rs. 8.60 crores more than in the corresponding period of the previous year. The total approximate ordinary working expenses, including suspense but excluding appropriation to the depreciation fund, up to the end of November, 1945, were Rs. 79.56 crores, which is Rs. 16.08 crores more than in the corresponding period last year.

FRANCE

Higher Passenger and Goods Rates

Further increases in railway passenger and goods rates are announced as a result of the Government's drastic cuts in expenditure to reduce the huge national budget deficit. M. Jules Moch, Minister of Public Works and Transport, stated that the deficit of the National Railways alone for 1945 was fr. 34,000 million (more than £70,000,000 at fr. 480 to the £). He therefore recommended higher railway rates, and also proposed a revision of the accountancy and general management of the S.N.C.F., which, he said, had great need of being adapted to present conditions.

Passenger rates were raised 40 per cent. for the third class, 10 per cent. for the second, and 20 per cent. for the first class on March 1. Higher rates were also introduced on some categories of goods. Other increases in freight rates will be made on April 1, May 15 and September 1. The high rate of 40 per cent. on the third class passengers is due to the fact that they were exempt when the first and second class rates were increased last January.

Kenya & Uganda Railways Jubilee Train

Train arriving at Nairobi, Kenya, on December 10, 1945, celebrating the fiftieth anniversary of beginning construction of the Uganda Railway (see article in our January 18 issue)

Design and Layout of Large Passenger Stations*

A survey of the principal considerations advanced by Mr. J. F. Bickerton and Mr. P. Protopapadakis, before the Railway Engineering Division of the Institution of Civil Engineers

THE passenger station is the focal point of contact between the public and the railway. The siting of the existing station will have had its influence on the town plan, and any revision of the one must be considered with revisions of the other.

The connection between the station roads and the public roads must be simple. One-way movement within the station area is indispensable, and the entrances and the exits must be arranged to work smoothly with the general traffic flow. Station approaches should not connect directly with arterial roads, ring roads, or even sub-arterial roads.

Broadly, passenger stations may be divided into two groups with fundamentally differing characteristics, terminal and intermediate. Stations in both main groups may be sub-classified according to whether the platform-level is definitely above, definitely below, or approximately at road or street-level. Terminal stations may be of the stop-block or through types, and intermediate stations may be simple, junction, or exchange; any large station is probably a combination.

The permanent-way layout must have first consideration, for it will govern many other features. The number of platforms will be determined by the number of trains, the intervals between them, and the time they stand at the platforms. The widths will depend on the intensity of passenger traffic, and the arrangement of the station buildings.

The permanent way through the station in no case should exceed the gradient 1 in 260, the maximum recommended by the Ministry of Transport. Where gradients are unavoidable, the major choice lies between high-level tracks, with low-level concourse and subway access to platforms, and low-level tracks with high-level concourse, and will probably be decided by local features.

Speed Restriction

For ideal conditions the platform and the approach lines would be on the straight. This is often impracticable, and curves must be introduced. Where there is high-speed through running, curves will be governed by this consideration, but at more important stations, with little through running, or where a speed restriction is not so detrimental, the operating advantages of straight platforms will have to be weighed against the complications caused by serious curvature in the approaches.

At the rail approaches to large stations, the main lines fan out into a number of tracks, and the commencement of such a fan may be called a "throat." The American Railway Engineering Association recommends that a throat serve not more than six station tracks. It is undesirable to have only one set of throat tracks, because of the congestion which may result from a mishap.

The design of the approaches will be affected by carriage sidings and locomotive yard, and by the intensity of movement to be provided for.

In a large terminal station the arrival and departure platforms will be kept separate, and a fly-over for dealing with empty stock probably will be well worth its cost. Usually such stations also cater for heavy suburban traffic, and special platforms should be set apart, and some form of flying junction provided.

As far as possible road and footpath approaches within the station area should be separate, and efforts made to avoid pedestrian crossings of roadways on the level. The roadways are the more costly, and should receive first consideration.

Car and taxi parking on the approach roads is unavoidable, but it should be made of short duration. Special garages or parking areas should be provided for longer periods, with corresponding stand-by areas for taxi-cabs.

The kerb-side accommodation can be estimated from the expected number of taxis and private cars at peak periods. Results of a series of observations, at Paddington Station, indicate that, given an ample supply of waiting cabs, the average time for loading of taxis is 18 sec., and for unloading, 40 sec.

Greater efficiency and greater convenience to the public, might be afforded if passenger-carrying motor-vehicles with heavy luggage drew up close to the cloak-room and excess luggage office, and motor-vehicles carrying passengers without luggage set down near the booking office.

The observations referred to have also shown that the arrivals of passengers for a train are spread over the half-hour before the booked time of departure, with a noticeable peak at about 15 min. before departure. On the train arrival side, the departure of passengers occupies a shorter period, but is largely dependent on the rapid supply of vehicles.

In congested districts, the only way to provide adequate car-parking accommodation may be to build multi-storied garages. Reasonable parking charges might not make such buildings profitable, but the indirect value in attracting rail traffic would be considerable.

Special provision for buses is not often made within the station area, but where suburban rail traffic is heavy, a bus station, free from other vehicular traffic, and with convenient pedestrian access to and from the station, is desirable. Convenient contact between the railway and any local air transport services must also be borne in mind.

All pathways should be spacious; to avoid a crush, 10 sq. ft. per person in a moving crowd is necessary, and for passengers with luggage the allowance should be 15 sq. ft. The average speed of movement may be taken at from 3 to 4 m.p.h.

Where changes in level occur, ramps or inclines are preferable to steps, but where steps are unavoidable, escalators should be considered essential for all except light traffic. A code of practice for escalators has been issued by the Building Industries' National Council. The angle of inclination is 30 deg., and usually the width between balustrades is 4 ft., the step-speed about 120 ft. per min., and the capacity at that speed up to 8,000 passengers per hour.

The carrying capacity of stairs decreases as the height increases. A one-way 20 ft. stairway will carry up to 18 persons per min. per ft. of its width, but for passengers with luggage, 10 persons per min. per ft. of width would be more appropriate.

Lifts should not be permitted in a normal traffic route, as they produce fluctuations in the flow. For luggage movements a system of lifts is essential for traffic between the platforms and subway or footbridge level, unless stairs and escalators are avoided by ramps.

Neither the present G.W.R. regulation maximum of 136 wheels, nor the present maximum coach length of about 70 ft. are likely to be increased. This gives a maximum train-length of 17 coaches which, allowing for engine and tender, requires a platform-length of about 1,250 ft.

The width of the platforms is dependent mainly on the type of traffic, and on positions of main entrances and exits. The guiding principle is sufficient width to hold the normal full train load without overcrowding. An allowance of 15 sq. ft. per person for main-line trains, or 10 sq. ft. for suburban trains, and 80 per cent. of the seating capacity of the train may be taken as the appropriate number to be provided for on this basis. Main-line platforms will require an allowance in width of at least 4 ft. 6 in. for luggage trolleys, in addition to the area per person.

Platform Accommodation

At departure platforms the intensity of crowding is usually not so great, as the empty train will be in position some time before departure. Against this must be set an allowance for persons seeing off friends and for the sale of newspapers, light refreshments and tobacco. Some width for seats will also be required on departure platforms, and the minimum allowance of 4 ft. 6 in. must also be made for luggage trolleys.

At intermediate stations each platform serves for the arrival and departure of passengers, and the period during which the trains stand at the platform may be shorter. The extent to which a train-load may be expected to be changed at an intermediate station is a matter for local judgment.

Buildings on the platforms should be limited to refreshment rooms, waiting rooms, conveniences, and indispensable staff rooms; the main dining rooms, cloak rooms, etc., should be on or near the general concourse. The clear platform-width facing the buildings should not normally be less than 15 ft., and never less than 12 ft. In view of capital cost, every effort should be made to restrict the width of buildings on the platforms; the lengths of buildings should be limited to about 100 ft., with at least 100 ft. length of clear platform space between blocks.

The average rate of unloading trains, shown by recent observations, was 2.43 sec. per passenger for main-line trains, and 1.96 sec. per passenger for suburban trains. The average rate of movement along the platforms was found to be 5.40 ft. per sec. for main-line passengers and 5.87 ft. per sec. for suburban passengers. The times obtained for the loading of departure trains was 2.35 sec. per person for passengers on main-line trains, and 1.96 sec. per person for suburban trains.

At one time it was the accepted practice for the access to each platform to be controlled separately by its own ticket-barrier. The barrier formed a serious bottleneck at peak periods, and at slack periods it was still necessary to keep a ticket-collector at the gate with, perhaps, little to do. Under the "train concourse" system, free movement between all the platforms is permitted within the barrier.

* Extracts from a paper, "Notes on the Design and Layout of Large Passenger Stations," read by Mr. John Frank Bickerton, B.Eng., and Mr. Petros Protopapadakis, A.M.Inst.C.E., before the Railway Engineering Division of the Institution of Civil Engineers, on February 26

"Liberation" Class Locomotives for France

A 2-8-2 mixed-traffic design built in the United States

EARLY in 1944 plans were prepared, under orders from the French Provisional Government in Algiers, for a locomotive to provide for French railway needs after the liberation. The French engineers based their plans on the Mikado type, already adopted to S.N.C.F. requirements in the "141-P" type of pre-war years, when 100 engines of that wheel arrangement were built in France and used in the Eastern and South-Eastern parts of the country. This type was considered especially suited to mixed-traffic service at relatively high speeds; the four coupled driving axles give the adhesion required for hauling the majority of French goods trains.

Contracts for 700 locomotives were distributed at first between the Baldwin Locomotive Works (Eddystone, Pa.), the American Locomotive Company (Schenectady, N.Y.) and the Lima Locomotive Company (Lima, Ohio). A further 400 engines were ordered from the same firms at the end of the year. Construction began in March, 1945, and trial runs of the first engine were made in the Lima Locomotive yards in July. The first consignment was received at Marseilles in November last year. The new engines are known as the "Liberation" class, and have the type classification "141-R." They are designed for a maximum speed of 62 m.p.h. (100 km. p.h.).

The engines are of the two-cylinder simple type, with the cylinders bolted to the frames. The French engineers would have preferred the cylinders in monobloc with the frame, but the American foundries under war conditions were unable to comply with this requirement. It may be adopted, however, in supplementary orders. The engine is of large dimensions, with the boiler barrel well elevated, giving easy access to the wheels. It is fitted with a mechanical stoker, Worthington feedwater heater, two Nicholson syphons, Timken roller bearings for the leading and trailing wheels (and possibly later for the driving wheels), mechanical lubrication, and servo-motor actuated by compressed air.

The main particulars are:—

Cylinders, dia.	23½ in.
Piston stroke	28 in.
Coupled wheels, dia.	5 ft. 5 in.
Engine bogie wheels, dia.	3 ft.
,, trailing wheels, dia.	3 ft. 6 in.
Heating surface	2,690 sq. ft.
Superheater	700 sq. ft.
Combined	3,390 sq. ft.
Grate area	55·5 sq. ft.
Working pressure	220 lb. per sq. in.
Tractive effort at 100 per cent. working pressure	53,460 lb.
Tender—	
Tank capacity	6,600 gal.
Fuel (coal)	10 tons
Bogie wheels, dia.	3 ft. 6 in.
Engine, total length over buffers	78 ft. 9 in.
Weight in working order—	
Engine	112 tons 5 cwt.
Tender	70 tons 18 cwt.
Adhesion weight	78 tons 14 cwt

The engines are being unloaded at the ports of Marseilles, St. Nazaire, and Antwerp, where large cranes are available. From the ports they are taken to Lille for the final fittings and tests. Completion and delivery of the order for the first 700 engines is expected in the current year.

U.S. Transportation Corps in Europe Graphically Portrayed

Story told in four stages; see illustrations on pages 249-252

WE reproduce this week, from a folder sent to us by 1st Lt. Louis Handwerger, T.C., Chief of the Historical & Technical Information Branch at the Office of the Chief of Transportation, U.S.A., four illustrations showing how the activities of the U.S. Transportation Corps in the European theatre of operations developed from June 6, 1944, until May 8, 1945, when the Germans surrendered. Statistics are given of tonnages, etc., handled at the ports, and of the increasing traffic handled by railways and roads and inland waterways as these facilities were opened up by the advancing Allies.

Briefly, the story of this fine achievement is divided into four periods: the first from June 6 to August 25, 1944, on which day Paris was liberated two months ahead of schedule. At this time there were 86,000 men of the T.C. in France. This period also saw the capture of Cherbourg on June 26, and from July 22 to August 3 six minor Normandy ports were opened. In these early weeks 230,560 long tons, 5,000 men, and 1,193 vehicles were unloaded at Cherbourg alone. The "Wildcat" railroads ran 508 trains over 3,134 miles of track and hauled 80,480 tons. The first scheduled train left Cherbourg for Carenton on July 11.

In the second period, August 26 to October 15, the first train entered Paris on August 30, and Allied troops were across the German border on September 12. At Cherbourg, 556,814 tons, 59,873 men, and 444 vehicles were unloaded, and at the minor ports 297,558 tons and 774 vehicles. The first ship was unloaded at Marseilles on September 15, the date of the first unloading at Le Havre being October 2, and at Rouen, October 15. During these weeks the 2nd M.R.S. ran 2,206 trains over 2,318 miles of track and hauled 828,337 tons. There were 132 companies engaged in road transport on the "Red Ball Highway" and 330,394 tons were conveyed along 802 miles of roads. By this time there were 103,661 T.C. men in Northern France.

Before the close of the third period, from October 16, 1944, to March 24, 1945, no fewer than 163,100 T.C. men were operating. The first train crossed into Germany on February 7, 1945. The breakthrough to the Rhine started on February 23 and the Rhine was crossed by the 1st U.S. Army on March 7. The railroads had now extended to include over 8,500 miles of track, and 13,032,102 tons were hauled. Emergency motor transport moved over 1,000,000 tons and for this work 90,000 men used 2,151 trucks. M.T.S. trucks consisting of 242 companies hauled 12,167,506 tons. Inland Waterways ran the first barge on November 17, and by March 24 controlled over 1,970 miles of water, having hauled 400,145 tons.

During the final period, March 25 to May 8, over 30,600 casualties were evacuated through ports to the United States. The first train crossed the Rhine on April 9 and altogether M.R.S. ran over 11,047 miles of track and hauled 4,545,574 tons. By the end of the period under review Inland Waterways were controlling 2,462 miles of water and had supervised the hauling of 488,176 tons. On April 1 the T.C. air branch was established and arrangements were made to fly 23,764 trips and transport 59,719 priority tons and 154,871 military personnel.

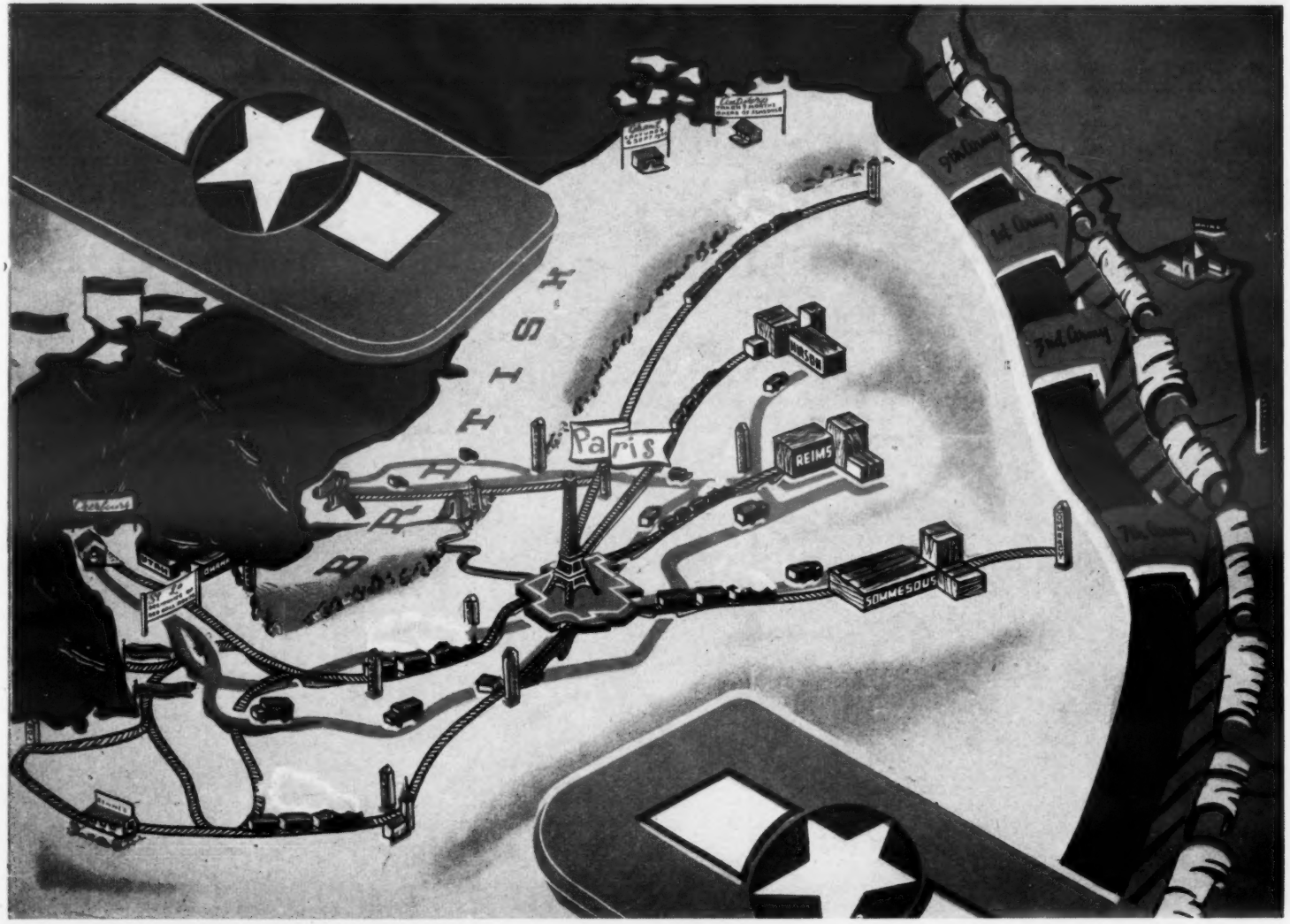
G.W.R. STATIONS.—The G.W.R. is to repaint 100 stations this year. The colour scheme will be the company's well-known chocolate and cream; trials will be made with other tints, notably pale green, for interior of offices and in corridors. The principal stations to be dealt with are: Paddington, Ealing Broadway, Newton Abbot, Paignton, Newport High Street, Pontypool Road, Cardiff General, Neath General. The programme also includes many stations and halts in Devon, Dorset, Gloucester, and Warwick, and is the most extensive for over 20 years. The total cost will be about £140,000.

Graphic History of the U.S. Transportation Corps : Period 1

Graphic History of the U.S. Transportation Corps : Period 1

More than 11,800 vehicles and 90,000 men were transported to Northern France in the D-Day armada

Graphic History of the U.S. Transportation Corps: Period 2

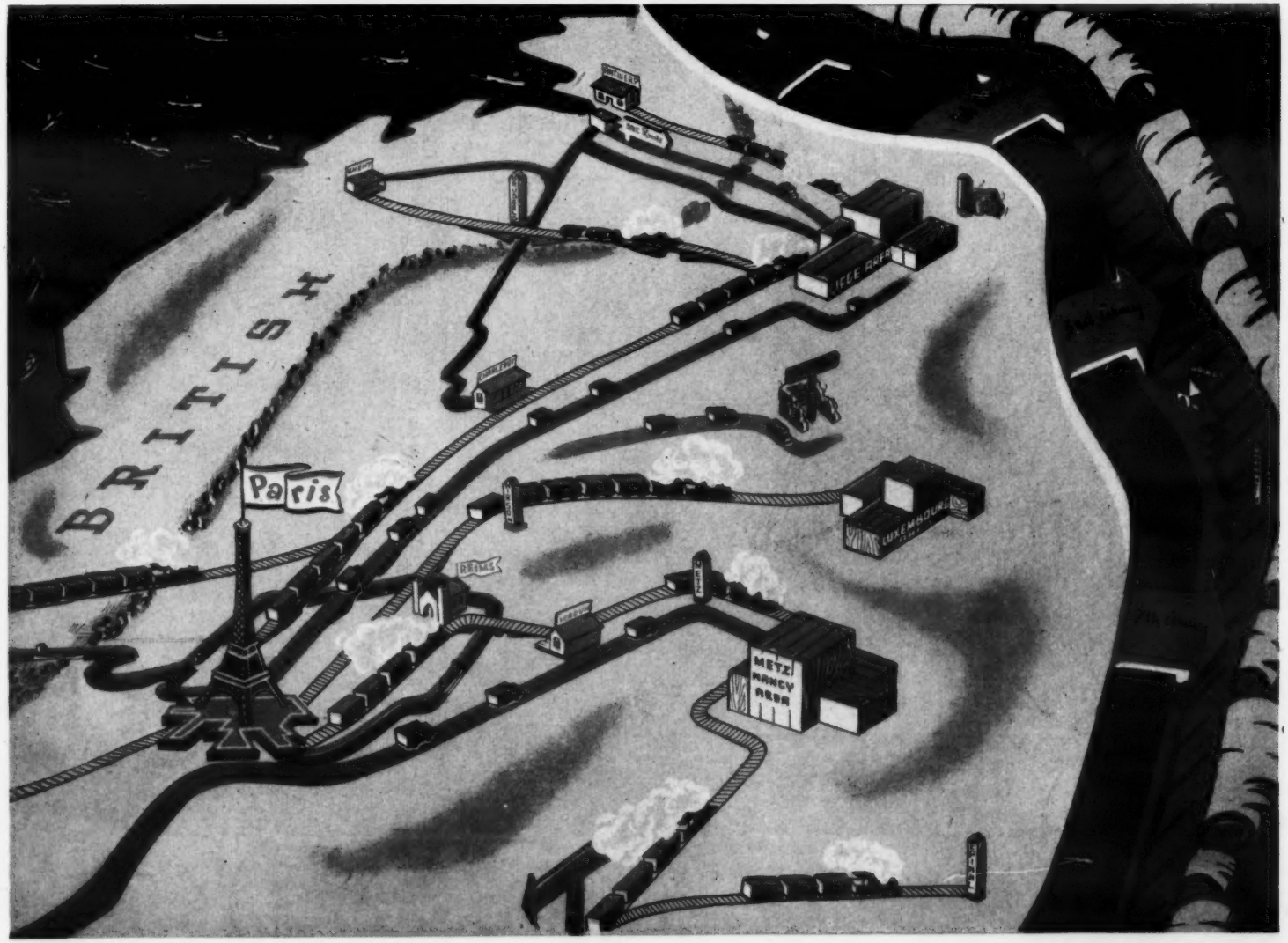


From August 26 to October 15, 1944, the 2nd M.R.S. ran 2,206 trains over 2,318 miles of track, and hauled 828,337 tons

Graphic History of the U.S. Transportation Corps: Period 3

From August 26 to October 15, 1944, the 2nd M.R.S. ran 2,206 trains over 2,318 miles of track, and hauled 828,337 tons

Graphic History of the U.S. Transportation Corps : Period 3



At the end of the third period, October 16, 1944, to March 24, 1945, over 8,535 miles of track were in use, and 13,032,102 tons were handled

Graphic History of the U.S. Transportation Corps: Period 4

On the day of the German surrender, May 8, 1945, the M.R.S. ran over 11,047 miles of track, hauling 4,545,574 tons, and Inland Waterways controlled 2,462 miles of water

L.M.S.R. Experimental Prefabricated Station

Speedy erection and flexibility combined with robustness of material

AS a result of investigations into the technical requirements of railway stations, which between 1941 and 1943 formed the subject of a number of reports, an experimental station was designed in the office of Mr. W. H. Hamlyn, F.R.I.B.A., Architect to the L.M.S.R., having characteristics which can be summarised under the following five main headings:—

1. Flexibility of construction to meet changing conditions and modifications in accommodation.
2. Speed of erection—especially important on stations where traffic must be interfered with as little as possible.
3. A range of materials having the qualities of durability, finish, insulation, etc.
4. A type of construction to withstand special conditions of vibration and atmosphere.
5. Low maintenance costs, involving the possibilities of easy cleaning and replacement of damaged parts, necessary to preserve a smart appearance.

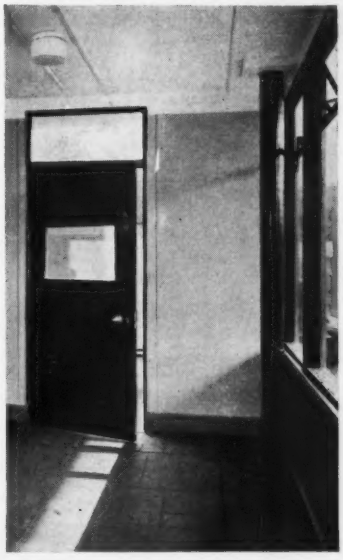
Problem Tackled as a Whole

Hitherto, where flexibility and speed in erection have been the main consideration, this has usually been at the expense of robustness of material, and when materials have been strong enough to satisfy these conditions, speed and flexibility have suffered. The problem has now been tackled as a whole and the experimental station represents the first attempt to combine all the required characteristics in one structure.

The first step towards solving the problem was the formation of a Building Research Committee on which there were scientific, engineering and medical representatives, the members of the Committee being Sir Alfred G. C. Egerton, Chairman; Mr. T. M. Herbert, Vice-Chairman; Dr. G. E. Graves Peirce, Mr. W. H. Hamlyn, Mr. M. G. Bennett, Mr. R. L. M'Ilmoyle, Dr. J. L. Martin and Mr. R. Ll. Davies. The last-named also acted as Secretary of the Committee.

It became obvious that a system of prefabrication and unit construction provided the basis for the solution of the problem. The first requirement, therefore, was a satisfactory dimensional grid, which had to be related to suitable sizes for doors, windows, spacing of booking office windows, room sizes and sizes of manufactured materials. A module of 3 ft. 4 in. was eventually agreed upon.

The general foundations of the building fall into line with the platform construction standardised by the L.M.S.R., with one innovation, namely, the introduction of a duct, formed of precast concrete units, which runs right round the building and accommodates the hot and cold water supply, heating main and drains. It also provides a continuous level surface on its outer kerb for fixing the wall posts.



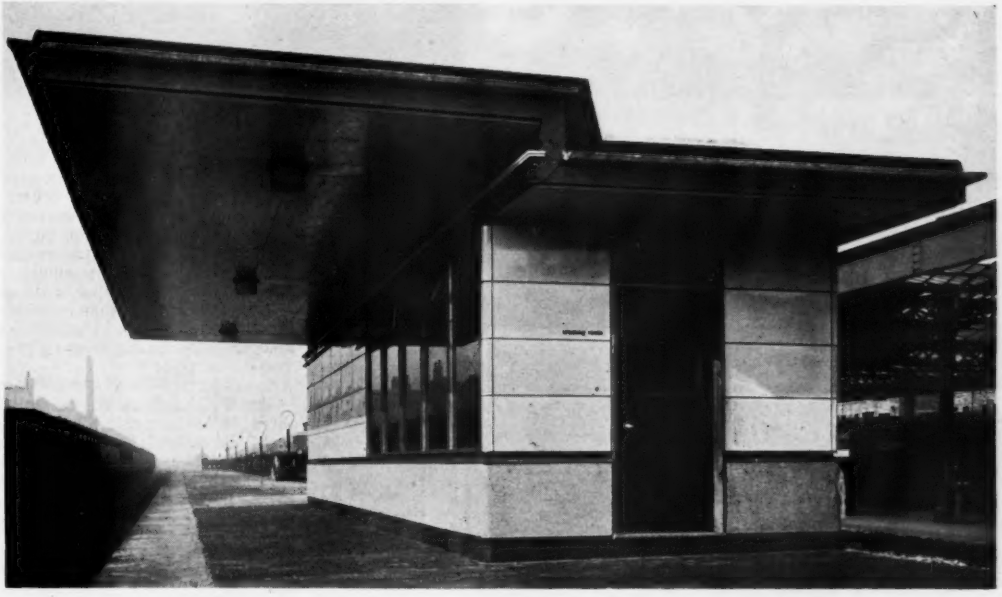
Internal doors are framed up on a single partition unit

The granite-aggregate finish below sill stands rough treatment

Main Structure

The main structure of the building consists of 6 in. dia. steel columns bolted to the foundations and carrying cranked beams which form the frame for the awning over the platform and for the roof of the building. The two roofs differ in height by about 1 ft. 3 in., the awning height being determined by the structure gauge which fixed the requisite height for its edge above the track, and the ceiling height by the proportions of the waiting room.

The arms of the cranked beams in the experimental building are balanced,



A view of the completed station at Queen's Park. The upper wall panels are made of vitreous-enamelled iron for easy cleaning

On the day of the German surrender, May 8, 1945, the M.R.S. ran over 11,047 miles of track, hauling 4,545,574 tons, and Inland Waterways controlled 2,462 miles of water

The foundations, showing the pre-cast concrete duct which takes the water supply, heating main, and drains

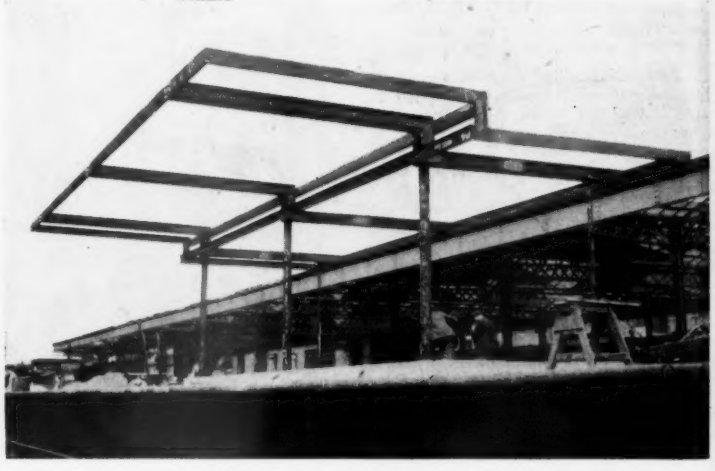
but a 3 in. diameter tie column is introduced on the waiting room side to provide for an unbalanced load, which would occur should the platform dimensions require a wider awning.

The beams themselves consist of two 7 in. × 2¼ in. welded steel channels spaced 8 in. apart and carrying a gutter in the roof side. The space below forms a duct for electric wiring. All steelwork was bolted together on the site. The walls consist of exterior and interior panels, windows and door frames, attached to wall posts spaced at 1 ft. 4 in. centres around the building. Three types of friction clip provide the fixing and allow screwing to be carried out from the front without holding the nut from the back.

The exterior walls of station buildings require special treatment, for luggage barrows are liable to cause damage up to sill level, and above that the principal need is for an easily cleaned non-absorbent surface. The panel finally chosen for the base is of precast concrete with a granite chip face, and the upper panels are of vitreous-enamelled iron, light blue in colour. Experiments on vitreous-enamelled panels were carried out some years ago and proved that the surface treatment was the right one to stand up to requirements, and also provided an interesting colour range.

Improvements have been introduced in enamelling and in a method of fixing which avoids passing screws through the enamelled surface. The panel consists of a tray fastened back to the wall post with a friction clip. Only the face of the panel is enamelled and no fixing shows. The windows and external door frames are of a special section designed to keep projecting and dirt-collecting ledges to a minimum by allowing the frames to fit flush in the external wall surface.

The design of the internal wall finishings has been determined by requirements of thermal insulation and flexibility in plan. The design of wall lining finally chosen consists of a panel built up of metal-faced plywood sheets on a timber frame. Fixings are concealed by skirting and cornice trim and the wall posts themselves by a cover strip. By leaving out this cover strip, at any point in the grid, particular units built up in the same way as the linings and attached only to floor and ceiling, can be taken off across the building, and provide a flexible means of dividing the interior. Internal doors are framed up in a single partition unit interchangeable with any other.



The main structure consists of steel columns bolted to the foundations and carrying cranked beams for awning and roof

The station was erected by a team of three skilled carpenters, one labourer, and specialist labour for steelwork and heating

A complete central heating service is provided consisting of a gas-fired boiler serving flush panel radiators from a ring main in the duct. A single horizontal cast-iron drain pipe, also in the duct, takes all the drainage, so that only one external manhole is required. The duct has removable cast-iron covers over its entire length

Results of Research

The building was erected by a team of three skilled carpenters and one labourer, with specialist labour for steelwork and heating. The Building Research Station undertook a complete time study of the work, from which the facts emerge that the building is most economical in erection, comparing favourably with standard methods hitherto employed. Further investigations are still to take place to test fuel efficiency, comfort conditions, etc., and in particular the weathering and amount of cleaning necessary to maintain the external surface.

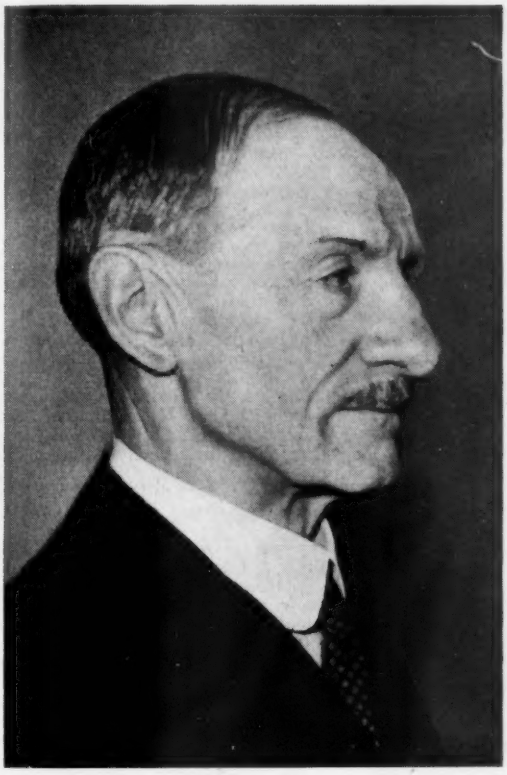
RAILWAY NEWS SECTION

PERSONAL

L.M.S.R. Chairmanship

At the annual general meeting of the London Midland & Scottish Railway Company on March 1, Lord Royden announced his retirement from the Chairmanship. The L.M.S.R. announced that Sir Robert Burrows has been appointed Chairman in his place, with the Rt. Hon. Earl Peel as Deputy-Chairman.

The Rt. Hon. Baron Royden of Frankby, C.H., J.P., D.L., who, as recorded above, at the annual general meeting on March 1, announced his retirement from the Chairmanship of the London Midland & Scottish Railway Company, succeeded the late Lord Stamp in that position in 1941. Lord Royden was born on May 22, 1871, and was educated at Winchester and Magdalen College, Oxford. He became a Director of the Lancashire & Yorkshire Railway Company in 1909, and, on the amalgamation of that company with the London & North Western Railway Company in 1922, became a Director of the L.N.W.R. On the grouping in 1923, he became a Director of the London Midland & Scottish Railway Company, and in 1940 was elected a Deputy-Chairman, and in 1941, Chairman. In 1934 he was appointed a representative of the L.M.S.R. on the Cheshire Lines Committee. Lord Royden is Chairman of the Dundalk, Newry & Greenore Railway Company. He has been a prominent figure in shipping circles for many years, and is a Director of the Cunard Steam Ship Co. Ltd., Cunard White Star Limited, Thos. & Jno. Brocklebank Limited, and the Port Line Limited. He is also a Director of the Suez Canal Company, the Midland Bank Limited, and of many other companies. He has been Chairman of the Liverpool Steam Ship Owners' Association, and President of the Chamber of Shipping of the United Kingdom. He was Unionist M.P. for Bootle from 1918 to 1922. Lord Royden was made a Companion of Honour in 1919. He succeeded his father as second Baronet in 1917, and received a Barony in the New Year Honours, 1944. Lord Royden is a Commander of the Legion of Honour, and of the Order of St. Maurice & St. Lazarus, and a Commander (Brother) of the Order of St. John of Jerusalem.



Lord Royden

Chairman, London Midland & Scottish Railway Company, 1941-46

Sir Robert Burrows

Appointed Chairman, London Midland & Scottish Railway Company

L.N.E.R. Appointment

Mr. H. G. Sayers, M.B.E., Assistant Superintendent (Scottish Area), has been appointed Superintendent (Scottish Area).

Sir Frank Nixon, with the consent of the Treasury, has left the Civil Service to become Chairman & Managing Director of John Brown & Thos. Firth (Overseas) Limited, the new company which, as announced earlier this year, has been formed by John Brown & Co. Ltd. to promote the export trade and overseas interests of itself and its subsidiary and associated companies. Sir Frank Nixon was formerly Head of the Export Credits Guarantee Department, and is on the council of that department; he is on the board of the United Kingdom Commercial Corporation Limited, of which he was a Managing Director during the war. The other Directors of John Brown & Thos. Firth (Overseas) Limited are Sir Stephen Pigott and Mr. S. W. Rawson (John Brown & Co. Ltd.), Sir Arthur Matthews and Mr. F. S. Middleton (Thos. Firth & John Brown Limited), Mr. A. E. Cook (Cravens Railway Carriage & Wagon Co. Ltd.), and Mr. R. J. Barclay (Markham & Co. Ltd.).

Sir Robert Abraham Burrows, J.P., who, as recorded above, has been appointed Chairman of the London Midland & Scottish Railway Company, was born on March 17, 1884, and was educated at Leys School, Cambridge. After some early business experience he began working in 1904 with Fletcher, Burrows & Co. Ltd., a concern which later became part of Manchester Collieries Limited. He is Chairman or Lancashire Associated Collieries, and of Manchester Collieries Limited. He became a Director of the L.M.S.R. in December, 1937, and a Deputy-Chairman in March, 1940. He is also a Director of the Dundalk, Newry & Greenore Railway Company, and of other companies. Sir Robert Burrows was one of the founders of the Lancashire & Cheshire Coal Research Association in 1918, and became its first President, from 1918 to 1928. He was a Member of the Fuel Research Board from 1923 to 1927, and is a Past Vice-President of the Institute of Fuel. For some years before the King's accession, he co-operated in running the Duke of York's Boys Camp. He is an Officer of the Order of St. John of Jerusalem.

The late Mr. A. Howie

Joint Accountant, Southern Railway, 1925-40

Photo] [Lafayette

Mr. A. H. Hawkins

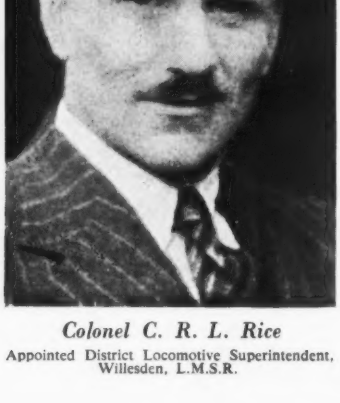
General Manager (Country Buses & Coaches), L.P.T.B., 1933-46

Mr. B. H. Harbour

Appointed Operating Manager (Country Buses & Coaches), L.P.T.B.

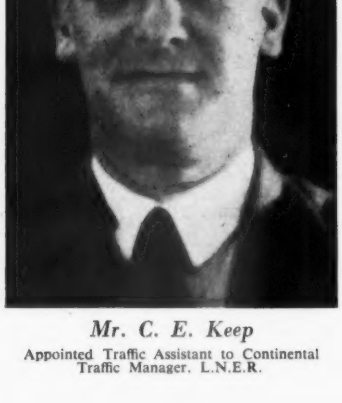
Mr. Andrew Howie, whose death, in his 69th year, we recorded last week, was Joint Accountant, Southern Railway, from 1925 until his retirement in 1940. Mr. Howie began his career with the South Eastern Railway in 1890 in the Locomotive Accountant's Office as a junior assistant. He later was transferred to the Chief Accountant's Office, London, became Chief Clerk, and in 1921 was appointed Assistant Accountant, South Eastern & Chatham Railway. He was an investigator of Railway Companies' Accounts against the Government throughout the Government control period, and was in charge of financial arrangements at Port of Richborough, including train-ferry and barge services, while those were worked by the S.E.C.R. for the Government. In 1923 Mr. Howie became Assistant Accountant of the Southern Railway, and in February, 1925, was appointed Joint Accountant with Mr. R. G. Davidson. He remained Joint Accountant until his retirement in 1940. Mr. Howie was concerned prominently in the two great legal cases which succeeded the new legislation arising out of the amalgamation of the railways, that is to say, the fixation of Standard Revenue, etc., in compliance with the Railways Act, 1921, and the new valuation of railways for rating purposes in accordance with the Railways (Valuation for Rating) Act, 1930. In each of those cases he gave evidence for his company. He also played a leading part in the formation of the London Passenger Pooling Scheme as provided by the London Passenger Transport Act, 1933, and in that case he gave evidence on behalf of all the parties. In 1938 he succeeded Sir Ralph Cope as Chairman of the Railway Accountants' Committee, and afterwards was appointed by the Railway Executive Committee as Chairman of the Accountants' Sub-Committee for 1939.

Mr. A. H. Hawkins, M.Inst.T., J.P., General Manager (Country Buses & Coaches), London Passenger Transport Board, who, as recorded in our January 18 issue, retired on March 1, began his business career with 14 years' experience in electrical contracting and the motor trade. In 1910 he conceived the idea of running motor buses between Reigate and Redhill, and was instrumental in forming the East Surrey Traction Co. Ltd. for that purpose. In 1932 the name of the company was altered to London General Country Services Limited, and Mr. Hawkins was Managing Director at the time it was taken over by the L.P.T.B. When Green Line Coaches Limited was formed in 1930, Mr. Hawkins became Managing Director. On the formation of the L.P.T.B. in 1933, he was appointed General Manager (Country Buses & Coaches), responsible for the development, co-ordination and operation of the country bus services and the Green Line coach services. Mr. Hawkins is Chairman of the London Transport (Country Omnibuses) Employees' Friendly Society, and a Justice of the Peace for the Borough of Reigate. Lord



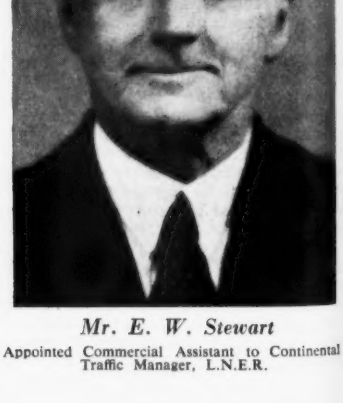
Colonel C. R. L. Rice

Appointed District Locomotive Superintendent, Willesden, L.M.S.R.



Mr. C. E. Keep

Appointed Traffic Assistant to Continental Traffic Manager, L.N.E.R.



Mr. E. W. Stewart

Appointed Commercial Assistant to Continental Traffic Manager, L.N.E.R.

Ashfield, Chairman of the L.P.T.B. presented a gold watch to Mr. Hawkins at a ball, organised by the Board's Country Bus Sports Association, at the Royal Theatre of Dancing, Tottenham, on February 28.

Mr. B. H. Harbour, formerly Commercial Manager, London Passenger Transport Board, who, as recorded in our January 18 issue, has been appointed Operating Manager (Country Buses & Coaches), joined the staff of the Accountant's Department, Metropolitan District Railway, in 1913, at the age of 14. After experience in many departments, he was appointed in 1927 to the Statistical Office of the Underground group of companies, and in 1928 to the office of the Secretary & Treasurer of the group. From 1930 to 1933 he was attached to the office of the Chairman of the companies for special duties with Sir Ernest Clark, a Director of the companies. On the formation of the L.P.T.B., he was transferred to the Actuary's Office, and early in 1935 he became Assistant to the Actuary, with responsibility for the financial, economic and statistical functions of that office. In 1937 he was made Secretary to the Chairman of the Board (Lord Ashfield), and in January, 1939, was appointed Secretary to the Standing Joint Committee of the Board and the four main-line railway companies. During the early part of the war he acted also as Assistant to the former Vice-Chairman (Mr. Frank Pick). Mr. Harbour was appointed an Officer of the Board in May, 1940. He was appointed Commercial Manager in December, 1943.

Colonel C. R. L. Rice, O.B.E., M.I.Loco.E. Assistant, Office of Divisional Superintendent of Operation (Motive Power), Manchester, L.M.S.R., who, as recorded in our February 1 issue, has been appointed District Locomotive Superintendent, Willesden, was educated at St. Peter's School, York, and joined the L.M.S.R. in 1924 as a premium apprentice at Horwich Locomotive Works. After further training at Kentish Town Locomotive Depot and in the office of the Divisional Superintendent of Operation, Derby, he was appointed Running Shed Foreman, Stratford-on-Avon, in 1929. He was Running Shed Foreman, Royston, Barnsley, 1931-34, and then returned to the Divisional Motive Power Office, Derby, as Mechanical Inspector attached to the Engine Maintenance Section. He was Enginemen's Mutual Improvement Class Inspector, Midland Division, Derby, from 1935 to 1937, when he became Assistant District Locomotive Superintendent, Saltley. He was transferred to the Central Division as Assistant (Motive Power) to Divisional Superintendent of Operation, Manchester, in 1942. He had been commissioned in 1932 in 155 (L.M.S.R.) Railway Workshops Company, R.E. (S.R.), and he served as Captain with the unit in France, 1939-40. He went to Persia in 1941, and was appointed D.A.D.Tn. (Locomotive Running), Transportation Directorate, Teheran, in 1942, with the rank of Major. He was recalled to the United Kingdom in March, 1943, and commanded a Railway Workshops Company before promotion to Lt.-Colonel in command of a Railway Operating Group in December, 1943. In May, 1944, he was posted to H.Q., 21 Army Group, as A.D.Tn., Railway Operating, and saw service in France, Holland and Germany before being appointed Deputy-Director of Railways, Essen, with the rank of Colonel, in June, 1945. Colonel Rice was awarded the O.B.E. and decorated by the U.S.S.R. with the Order of Patriotic Warfare, Second Class. He was mentioned twice in despatches for services in the Persian and North-West European theatres.

Mr. Charles E. Keep, Assistant Marine Superintendent (Harwich Services), L.N.E.R., who, as recorded in our February 15 issue, has been appointed Traffic Assistant to the Continental Traffic Manager, joined the Great Eastern Railway in 1908, and served in the Chief Traffic Manager's Department at Ipswich and London. After returning in 1919 from service in the 1914-18 war, he was posted to the Continental Department at Parkeston Quay. In 1924 he transferred to headquarters, and later was promoted to be Chief Staff Clerk, Continental Traffic Manager's Department. In August, 1926, he was appointed Assistant Marine Superintendent, Parkeston Quay.

Mr. E. W. Stewart, who, as recorded in our February 15 issue, has been appointed Commercial Assistant to the Continental Traffic Manager, L.N.E.R., joined the Great Northern Railway in 1905 in the Chief Accountant's Office. From 1914 to 1919 he was on His Majesty's service. In 1923 he went to the Chief Accountant's Head Office, L.N.E.R. From the accountancy side of the L.N.E.R. steamships undertaking he gradually assumed a closer connection with Continental traffic affairs, until in 1928 he became Secretary, Humber Steamships Pooling Committee, and in 1932, Accountant, London-Holland Steamship Pools. In 1934 Mr. Stewart went to the Continental Department as Chief of the Rates Section, and remained there until 1940, when Continental activities were suspended. From 1940 to 1945 he has held a wartime post as Chief Accountant's Resident Auditor at the Funds Office, Peterborough.

Sudan Railways

Mr. J. L. Willoughby, O.B.E., Traffic Manager, has been appointed Deputy General Manager, to succeed Mr. R. H. Robertson, when the latter takes over as General Manager.

Mr. E. C. Chandler, Assistant Traffic Manager, is appointed Traffic Manager.

Subsequent to the resignation, on account of ill-health, of Mr. G. J. Murphy from the position of Chief Engineer to the Irish Transport Company, Mr. T. R. Leonard, District Engineer, Waterford, has been appointed Chief Engineer.

We regret to record the death, at Giffnock, Glasgow, on February 18, of Mr. John Alston, Consultant and Inspecting Engineer, who was at one time District Locomotive & Workshop Superintendent, Puchen, Tientsin-Pukow Railway, Chinese Government Railways.

Among the members of the Court of the Bank of England who have been appointed under the Bank of England Act, 1946, are Sir Patrick Ashley Cooper (a Member of the London Passenger Transport Board), and Sir Charles J. Hambro (a Director of the Great Western Railway Company) (for one year); Mr. E. Holland-Martin (a Director of the Railway Finance Corporation Limited) (for two years). Among members of the present Court who now retire, as being over age or nearing the age limit, are Sir Edward Peacock (a Director of the Canadian Pacific Railway Company), Sir Alan Anderson (a Director of the London Midland & Scottish Railway Company), Mr. G. M. Booth (Chairman of the San Paulo (Brazilian) Railway Co. Ltd.), and Mr. W. K. Whigham (a Director of the London & North Eastern Railway Company).

Mr. S. A. Bunnell, Development Engineer, Iraqi State Railways, is among those recently transferred from associate membership to full membership of the Institution of Civil Engineers.

L.M.S.R. Staff Changes

Mr. E. S. Cox, Chief Technical Assistant, becomes responsible for all locomotive and rolling stock development work in the Chief Mechanical Engineer's Department, Derby.

Mr. J. Rankin, Works Superintendent, Locomotive Works, Derby, to be Works Superintendent, Locomotive Works, Crewe, in place of Mr. R. C. Bond, promoted.

Mr. A. E. Robson, Assistant Works Superintendent, Locomotive Works, Derby, succeeding Mr. J. Rankin as Works Superintendent, Locomotive Works, Derby.

Mr. M. G. Burrows, Assistant Works Superintendent, Locomotive Works, Horwich, to be Assistant Works Superintendent, Locomotive Works, Derby.

Mr. E. R. Brown, Assistant to Works Superintendent (Inspection), Locomotive Works, Derby, to be Assistant Works Superintendent, Locomotive Works, Horwich.

Mr. I. C. Forsyth, Assistant, Office of Superintendent of Motive Power, Chief Operating Manager's Department, Watford H.Q., to be Assistant Works Superintendent, Locomotive Works, Crewe, in place of Mr. J. E. Bagguley, resigned.

Mr. A. E. Bates, Assistant Works Superintendent, Carriage & Wagon Works, Derby, to be Works Superintendent, Wagon Works, Earlestown, in place of Mr. W. Anthony, retiring.

Mr. W. S. Wildman, Machinery & Plant Assistant to Works Superintendent, Carriage & Wagon Works, Wolverton, succeeding Mr. A. E. Bates, as Assistant Works Superintendent, Carriage & Wagon Works, Derby.

Mr. F. G. Umpleby, District Outdoor Machinery Assistant, London, to be Senior Assistant (Outdoor Machinery), Chief Mechanical Engineer's Department, Derby.

Mr. G. E. J. Monson to be Assistant to Road Motor Engineer, Watford H.Q.

Mr. J. T. Wiggans, Stationmaster, Manchester (London Road) & Mayfield (also in charge of L.N.E.R. Station), to be Station Superintendent, Holyhead.

Mr. W. G. Rose, Stationmaster, Blackpool (Central), succeeding Mr. J. T. Wiggans as Stationmaster, Manchester (London Road) & Mayfield (also in charge of L.N.E.R. Station).

Mr. V. Hazeldine, Assistant Stationmaster, Crewe, to be Stationmaster, Blackpool (Central).

Mr. R. H. Frankland, Head Office Inspector, Office of Divisional Superintendent of Operation (Motive Power), Manchester, to be Assistant District Locomotive Superintendent, Edge Hill, in place of Mr. C. S. Longsdale, promoted.

Mr. W. M. Roscoe-Taylor, Running Shed Foreman, Saltley, to be Assistant District Locomotive Superintendent, Bescot, in place of Mr. R. Tildesley, promoted.

Mr. L. D. Taylor, Foreman Fitter, Motive Power Depot, Springs Branch, to be Assistant District Locomotive Superintendent, Camden, in place of Mr. N. R. Peach, promoted.

Mr. D. R. Frew, Senior Clerk, Special Investigations, Chief Accountant's Office, Watford H.Q., to be Hotels Accountant, Watford H.Q.

London Midland & Scottish Railway Company

Awards to staff—Executive changes—Financial results—Operating statistics—Civil engineer's and mechanical departments—Northern Ireland transport—Case against nationalisation

THE twenty-third annual general meeting of the London Midland & Scottish Railway Company, was held at Euston Station, London, N.W.1, on Friday, March 1, 1946. The Rt. Hon. Lord Royden, C.H., Chairman of the company, presided.

The Secretary (Mr. G. R. Smith), having read the notice convening the meeting,

The Chairman said: My lords, ladies, and gentlemen, the report and accounts for the past year are on the table and as they have been in your hands for some days I presume that you will as usual take them as read.

During the war 1,810 members of our staff lost their lives while on active service or owing to enemy action while on duty during air attacks. In their honour and as a mark of sympathy to their friends I ask you to stand with me for a few moments in silence.

Before dealing with the business side of our affairs I offer our congratulations to those members of the board and to the staff who have been honoured by His Majesty the King during the past year in recognition of their public and railway service. Sir Murray Stephen has received a knighthood, and Sir Ian Bolton the O.B.E. Mr. Pope, our Chief Commercial Manager, was awarded the C.I.E., and Mr. Wallace, our Chief Civil Engineer, the C.B.E. An O.B.E. has been given to Mr. Pugson, who has recently been appointed Mechanical Engineer for Carriages & Wagons. In addition, 17 members of the staff have received decorations from His Majesty in recognition of meritorious railway service. For courageous action one of our firemen was awarded the George Medal and a member of the Police Department the King's Police & Fire Services Medal, the first L.M.S.R. man to be given this high award. Two Stamp Medals also have been awarded for bravery. Since the commencement of hostilities 339 decorations have been awarded to members of the staff serving with the Forces.

Sir Alan Anderson, who resigned his seat on this board on his appointment as Chairman of the Railway Executive Committee & Controller of Railways, after years of most valuable service in those important and highly responsible posts, has retired from them and rejoined our board. He is one of the original directors of the company, having come on from the Midland board at the time of the amalgamation, and his special knowledge of shipping and finance is of great value to us. The board has also been strengthened by the inclusion of Lord Woolton, whose qualifications are too well known to you to need any eulogy from me. Mr. H. S. Sharp has been appointed a member of our Scottish Committee, where his knowledge of business in Eastern Scotland will be most valuable.

On staff matters, Sir Harold Hartley, who was one of our Vice-Presidents, has retired and is now a member of the board of the B.O.A.C. He joined the L.M.S.R. 15 years ago as Vice-President & Director of Scientific Research, and since that time he has successfully instituted many new methods of approach to the company's engineering and scientific problems. He was largely instrumental in obtaining recognition of the all-important part science now plays in every branch of industry, and we wish him all possible success in his new, arduous and difficult task.

We have suffered a great loss by the death of Mr. Fairburn, our Chief Mechanical & Electrical Engineer, a man of the highest attainment with the habit of getting things done. In particular, his knowledge of electrification of railways was outstanding, and we were relying on his experience for the solution of the many electrical problems which face us in the future. In his place Mr. H. G. Ivatt has been appointed Chief Mechanical Engineer, and under him we have appointed three Mechanical Engineers, Mr. Bond (Locomotive Works), Mr. Pugson (Carriages & Wagons) and Mr. Harper (Electrical).

Mr. Humphrys has been appointed Chief Solicitor, and Mr. Ball, Estate Manager & Rating Agent, in succession to Mr. Eddy, Mr. Roberts, and Mr. F. Smith, who, after long and faithful service, have retired on superannuation, carrying with them the regard and appreciation of all of us who knew and worked with them.

Net Revenue

The net revenue for the year in comparison with that of 1944 can be stated simply, as follows:—

	1945	1944	Inc.
		Thousand £	
Under Control Agreement	14,750	14,750	—
Outside Control Agreement—			
From year's working ...	950	929	21
From earlier years' working	519	—	519
	16,219	15,679	540
Appropriated for wartime contingencies	—	*Dr.* 400	400
Transfer from contingency fund	500	—	500
	16,719	15,279	1,440

The credit of £519,000 arises from various adjustments of earlier estimates which can now be brought into net revenue.

The transfer from the contingency fund is, as the report states, in accordance with the policy which I explained when the accounts for 1943 were submitted. I told you then that in the critical war years we had been conservative in our estimates and that, if the appropriations made out of available profits were found to be in excess of the liabilities, the excess would again become available for dividend. The position is becoming clearer and it is considered practicable to return £500,000 to the credit of net revenue, leaving a balance of £2,100,000.

Balance Sheet

Other reserves which we hold are large and war-time conditions have materially increased them. Ignoring those for superannuation and like purposes, they are of four different types. First, we have those to cover fire and other risks, totalling £1,182,000. Then we have the funds set aside for new rolling stock, track, stations, steamers, and so on, which totalled £39½ million in 1945 compared with £13¾ million in 1938. The increase is mainly due to arrears of work which have accumulated during the war. The third, which totals £9 million and is not separately shown in the balance sheet, is for arrears of repairs and partial renewals which have arisen solely during the war and will be used to make good these obvious arrears as quickly as possible. Finally, there are the general reserve and contingency funds which total £4.2 million compared with £2.5 million in 1938.

War Damage

In 1942 I told you that arrangements for war damage on the railways were, by the new agreement, brought into line with those affecting other public utility undertakings, and, in due course, would be embodied in an Act of Parliament. Subsequently it was shown in a White Paper that for the purpose of applying the proposed contributions, public utility undertakings would be divided into nine groups, the railways forming one of them. The necessary legislation has not yet been introduced.

Under the control agreement expenditure chargeable for repairs and renewals is calculated on the average of similar expenditure in the years 1935/6/7 adjusted to the level of current prices and variations in assets since the base period. The difference between the aggregate of these charges and the actual outlay for the 6¼ years to December last is approximately £34 million. The agreement also further provides for payments to compensate for abnormal wear and tear, of which the amount cannot yet be appraised. Doubts on this and other potential liabilities were, as I explained in earlier years, the reason for the reserves made out of net revenue to cover war-time contingencies in the years 1940/44.

Operation of the Line

Fighting has ceased and there has been a certain measure of relief in some directions, but our operating difficulties are not yet over. We are still severely handicapped by shortage of experienced staff, and although men are gradually returning from the Forces, the rate of demobilisation is not yet fast enough to make an appreciable impression. Furthermore, there has been an abnormal amount of sickness amongst the operating staff and some absenteeism due, no doubt, to some extent to the strain imposed by working long hours under the very onerous conditions during the six years of war. These factors, coupled with the exceptional traffic circumstances—many special trains are still required for Government purposes—and the inferior quality of coal available for locomotive purposes, were reflected in the unpunctual running of many passenger trains this winter.

Passenger Traffic

Throughout the year 1945 passenger travel was exceptionally heavy and a record in the history of the company, being about 3 per cent. greater than in 1944 and 78 per cent. greater than in 1938. The increased traffic was conveyed with a reduction of about 25 per cent. in loaded passenger train miles compared with 1938. After VE-Day the widespread and very natural desire for a holiday after the years of war strain, together with the large number of services personnel travelling by ordinary trains, particularly at week-ends, taxed the line almost beyond capacity. There was much overcrowding, but it is anticipated that conditions will improve considerably in the course of this year.

Freight Traffic

The end of the war in Europe was followed by a considerable reduction of freight traffic for the Service Departments, but in spite of this, the freight traffic during 1945 was much above pre-war level. The net ton-miles for 1945 totalled 9,593

millions, an increase of 2,657 millions or 38 per cent. more than for the 12 months before the war. The total loaded-wagon-miles were 1,577 millions, or 20 per cent. greater. Of this, the increase in general merchandise traffic was 25 per cent., minerals 16 per cent., and coal 11 per cent.

Sleeping Car Services

Although the number of sleeping cars run exceeded the pre-war figures, the demand for sleeping berths was greater than the accommodation available for the public after Government priority requirements had been met. To provide more sleeping cars would have necessitated running additional trains as those conveying sleeping cars were already carrying their maximum load. When opportunity has arisen, provided it does not involve any reduction in the number of ordinary coaches and so increase overcrowding, additional sleeping cars have been run.

Hotels and Refreshment Cars

Business in the hotels generally has remained at a very high level throughout the year. The end of the war has so far provided little relief in the reduction of the handicaps under which they have operated, such as food restrictions, and the shortage of labour and equipment of all kinds. The demands on the refreshment rooms have continued to increase, and an unprecedented number of passengers has been served with refreshments. The large railbars at the principal termini, as well as the small prefabricated railbars at many other stations, have served a useful purpose. A comprehensive programme of reconstruction and modernisation of refreshment rooms has been embarked upon.

Owing to the heavy passenger traffic and the acute shortage of staff it has not been possible to restore the restaurant-car facilities on a pre-war basis, but these have so far been reintroduced on 44 of the principal trains. They have been very well patronised—approximately 50,000 meals per week being served. When conditions permit, the services will be augmented and an active policy of development in all forms of catering on trains is being pursued.

Steamship Services

Because of the large number of the company's ships requisitioned by the Government, and losses whilst on service, the maintenance of our cross-Channel passenger and cargo steamship services has provided some difficult problems. Nevertheless, the services have been maintained regularly with the tonnage available. Since the cessation of hostilities there has been a gradual release of requisitioned vessels and as these become available for service after reconditioning, our difficulties should be eased. On the east coast three Goole steamers have been allotted to the Goole Steam Shipping for service to and from the continent, including Copenhagen.

Passenger Train Accidents

Two accidents to passenger trains on this company's system occurred recently, involving a regrettable loss of life. These tragic mishaps were due to exceptional causes, and there is no reason to think that the safe operation of the line has suffered in any way as a result of the strain of wartime conditions and difficulties. Careful investigation of the known facts proves conclusively that the high standard of safety of the British railways has been in no way impaired. Safety devices and improved signalling methods are continually under examination, and it is our constant endeavour to provide every possible aid to the safe running of the trains.

I have told you at previous meetings during the war of the serious loss of goods by theft. Last year the number of claims for goods lost and stolen showed a slight decrease for the first time since pre-war days, but there is still a considerable amount of thieving and no less than 70 per cent. of the amount paid in claims arises from this. We continue our active endeavours to combat the evil.

Civil Engineer's Department

The cessation of hostilities, so far, has added to, rather than detracted from, the difficulties of maintaining the track, stations and other structures in a satisfactory condition. There has been a slight improvement in the labour position after the commencement of demobilisation and the return of a certain number of experienced staff to their previous work, but the removal of the blackout and kindred items has imposed on the department a great deal of additional work for which sufficient labour and material are not yet available.

The condition of the permanent way is little altered. During the year almost 400 miles of new rail have been laid and 460 miles of sleepers renewed, but there are still heavy arrears. At present the outstanding difficulty with regard to relaying is the serious shortage in the supply of chairs. In 1937 my predecessor referred to the experiments we had undertaken by laying a short mileage of track with flat-bottom rails, a type we had not tried in England in recent times but which is almost universal abroad. The trials have been continued with certain modifications, and there are indications that the day to day maintenance is less, but the war has delayed experimenting to any great extent. We now propose, however, to lay a greater proportion of these rails. We are also continuing our experiments with concrete sleepers.

Developments in the field of communications are being closely studied and trials with radio are in hand. We were not permitted to use radio for our purposes before the war, but a limited use of it during the war was permitted in emergencies.

Mechanical Departments

Both locomotive and carriage shops have during the year completely changed over from Government work to their normal tasks although these are not even yet in full swing. The shops are now entirely concentrating on new construction and repair work; 141 new locomotives and six diesel-electric locomotives were turned out, compared with 131 in 1944.

Work for the fighting services completely stopped carriage building during the war and the first new passenger coach built since the outbreak of war came into use on May 9 last. By the end of December 203 new carriages had been put into service. The rate of production, which has steadily increased during the year as labour and material became available, is now nine new carriages a week. A satisfactory commencement has been made with the task of overtaking arrears of carriage maintenance which accumulated during the war years.

Because of shortage of labour, the number of wagons awaiting repairs increased considerably during the spring and summer, but by greater use of voluntary labour at weekends and the partial curtailment of heavy repairs in the main workshops to permit of an increased output to light repairs, the position had been restored almost to normal at the end of the year. The number of wagons built was 6,720 compared with 5,252 in 1944.

With the end of the war supplies of materials in many instances have become more difficult and the coal position is definitely worse than a year ago. Whilst we have been able to maintain the consumption required, our stocks have been reduced and the quality has varied considerably. The cost of coal and coke has risen by 16 per cent. over 1944, and prices are now more than double the pre-war average.

Staff

The number employed last year averaged 234,500 compared with 231,000 in 1938; the total salaries and wages amounted to £71 million compared with £41½ million in 1938.

After negotiations between the Railway Executive Committee, acting on behalf of the Government, and the trade unions, the rates of pay of the wages grades were increased from July 30, 1945, by amounts ranging from 7s. a week for the minimum rated grades to 10s. a week in a number of the higher grades, including an increase of 2s. 6d. a week in the war wage, making the total war wage 28s. a week for adult male staff and 24s. a week for adult female staff. Corresponding increases were made in salaries. These increases, it is estimated, will cost the company about £7½ million per annum. It was also agreed to increase the annual holidays of the wages staff from six to 12 days.

The shortage of staff in the maintenance and operating grades and the difficulties in recruitment of suitable personnel continued during the year. Consequent on demobilisation, we have been able to recruit during the last few months at a higher rate than previously and our own employees are gradually returning from the Forces. In June, when general demobilisation started, 38,474 employees were serving with the Forces and civilian defence services; by the end of the year 6,000 had been released, and it is anticipated a further 20,000 will have been released by the end of next June. This should considerably ease our working difficulties. The number of women employed is now approximately 36,000 compared with a "peak" figure of 41,000 in 1944. The drop is mainly accounted for by married women leaving owing to cessation of manufactures for the Government. Italian prisoners of war are being repatriated and it is anticipated that the majority of the 2,815 now employed by us will have left by the middle of this year.

Parliamentary Matters

It has been necessary to promote a Private Bill to secure certain locomotive water supplies on the Midland Section of the Railway and for other purposes and also a Scottish Provisional Order. The Bill and Order will be submitted for approval at a special general meeting to be held on March 19.

Since the last meeting several important public Bills specially affecting the interests of railway companies have received the attention of the company's advisers and appropriate amendments have been secured. Of these I might mention the Requisitioned Land & War Works Act, 1945, which deals with some complicated questions arising from the construction by the Government for war purposes of factories and other works, many of which have been erected on railway-owned lands. It also deals with continued use of railway works constructed under emergency

powers. The Water Act, 1945, deals comprehensively with water supplies of the country.

Position in Northern Ireland

The Government of Northern Ireland has been considering for some time the future of transport and has issued recently a White Paper, the main conclusions of which are that public transport by rail for some classes of freight and passengers is still essential to the life of the community. This transport could not, under normal peace conditions, be provided by the railway companies at the existing rates and fares unless they could secure a satisfactory volume of traffic. This would be very difficult, if not impossible, in face of competition from private transport and from public transport by road, and if the railways raise rates and fares their loss of traffic to their competitors might merely be accentuated. The Government proposes, therefore, that the principal public transport undertakings (the Northern Ireland Road Transport Board, the Belfast & County Down Railway, the system of the N.C.C. of the L.M.S.R., and the system of the G.N. (I.) in Northern Ireland) shall be merged into a single undertaking. The Government has obtained the approval of Parliament to negotiations for the purpose of arranging such a merger. The provisions of the necessary legislation and the precise form and constitution of the merged undertaking will depend on the course these negotiations may take, and the position is being closely watched in the interests of the stockholders.

Railway Control Agreement

You will remember that by the Railway Control Order, 1939, made under Regulation 69 of the Emergency Power (Defence) Act, 1939, the control of our railway was taken over by the Minister of Transport on September 1, 1939. Under the Railway Control Agreement control was to be continued for a minimum period of one year after the cessation of hostilities; and before it came to an end time would be given for the restoration of any statutory machinery governing the level of charges. That position has been modified by the Supplies & Services (Transitional Powers) Act, 1945, under which an Order in Council has been made continuing Regulation 69. This Order in Council does not specify the period for which the Minister's control is to be continued, but the Supplies & Services (Transitional Power) Act is to operate for five years, and, if extended by Order in Council, for one further year. We are liable, therefore, to be controlled for a further six years, but we are now informed that a Bill for the nationalisation of railways will be laid before Parliament.

Nationalisation

A year ago I explained to you the contemplated extensions of our air services. At that time the Government had asked for and received our plans for the future which in conjunction with the other railways and the shipping companies concerned provided a comprehensive network of services in the United Kingdom and with Europe. This scheme, with some modifications, was approved by the then Government. It was agreed that the services should be run without any subsidy except where they competed with services subsidised by other countries. The present Government has cancelled this plan and has decided to submit proposals to Parliament to take over our services. At his request we have sent to the Minister of Civil Aviation our comments on the Government scheme, and have agreed, until the Government is ready to take over, to carry on with our booking arrangements, and other facilities at present provided for air travel. The reasons for this decision appear to be entirely political. There is no suggestion that there has been any inefficiency in operation on our part.

We have urged that it would be inequitable if the terms of compensation did not include in addition to a payment for the physical assets taken over by the Government, the repayment of the net losses incurred in developing the services that are being appropriated. A pioneer in a service of this nature cannot expect immediately to make even his working costs. Indeed, the Government acknowledges this in its proposed new services, but suggests that services which have now passed through the development period and are firmly established should be transferred to it on the basis of the value of the physical assets alone. To that, naturally, we object. The establishment of this business cost a considerable sum of money and in common justice we, the owners, should be reimbursed for this.

What I have just said about the Government financial policy in regard to that part of your undertaking which covers air services applies with even greater force to the railway portion of it, if only because of the wide variety of the services performed by it, which number several millions every day. The decision to nationalise the railways, as in the case of the air services, is political, and not based on any suggested lack of efficiency or economy in the conduct of the undertaking. I do not suggest we are superhuman and never make mistakes. Each member of our staff of about 250,000 men and women cannot be expected to be right all the time, but I can and do assert with complete confidence that from the date of the formation of the Company in January, 1923, to the time when Parliament placed the railways under the control of the Minister of War Transport, we met in full all the obligations to the public placed on us by Parliament, and showed great initiative, resource, and enterprise in the conduct of our affairs. I said to you when we met two years ago that it was contrary to the public interest that the Government should be directly concerned in the management of any trading undertaking, and that while we are in the hands of Parliament on such matters your board would contest vigorously any proposal which in its opinion was detrimental to your interests.

When the Government has let us know its proposals in regard to your property we shall, of course, consider these on their merits, and until these proposals are made I can deal only with the abstract question of purchase by the Government of our property.

Mr. Herbert Morrison, Lord President of the Council, speaking at Toronto during his tour of Canada in a speech that was broadcast throughout that Dominion, made the following significant and highly relevant observations in defence of the policy of widespread nationalisation of certain vital sections of industry, including railways.

He said: "Generally speaking, Britain will not manage her nationalised industries by State departments or Civil Servants. . . . In itself, the policy of nationalisation of industry is controversial. It might be useful if I, a Minister, give you the sort of reasons why the United Kingdom Labour Government is adopting this policy in the United Kingdom .. . . It is the public interest that counts, and the real field for argument is how best can the industry be organised or managed with a view to achieving economic public advantage. It is up to the nationalisers to prove their case that there will be public advantage by nationalisation. It is no less up to the anti-nationalisers to prove their case that the public interest can best be served by private ownership. Let the argument be directed to the merits and let the test be the public interest."

I welcome this declaration of policy. It is, after all, common sense and reveals a new outlook on the Government side. So far the Government utterances on the subject of nationalisation have all taken the same line, namely, that as the electorate has returned by a large majority a Socialist Government, it is the duty of all patriotic citizens to accept without criticism and without explanation the policy of the Government in the matter of nationalisation and to help it by all means in their power. This is surely an extraordinary attitude of mind and a wholly mistaken one. Is the Opposition in Parliament performing an unpatriotic act when it opposes Government measures which it regards as harmful or mistaken? Surely not. Nor is it unpatriotic of the individual citizen, nay, it is his duty, to oppose the passing of any measure which he considers harmful to the interests of the State. This is the essence of democracy.

In his speech at Toronto, of which I have given some extracts, the Lord President of the Council very distinctly lays it down that nationalisation of industry must be dealt with on the merits of each case and not simply on the *ipse dixit* of a member of His Majesty's Government. I believe, and I am confident that my belief is shared by the vast majority of the stockholders in this railway, that nationalisation of railways would be a misfortune to the community and inflict serious damage on the industry of the country. It is therefore in the public interest that we should oppose it by all lawful means, and we intend to do so.

Now what is our case for retaining the ownership and operation of the railways? Opportunity has been taken on this occasion to prepare a small booklet for your information describing the work of the company during the years since its formation. It records in concise form the principal steps taken to create your undertaking and to organise its activities so as to secure the utmost efficiency and economy in the public service it rendered before and during the war. These facts are ignored by those who wish to discredit the railways for political purposes. Copies of this booklet will be distributed to those attending our meeting today and sent to others who are interested.

Since 1939 we have passed through the most severe test which could have been applied to our undertaking and with complete success. The railways are still working under the rigorous limitations to their profit-earning capacity which Parliament laid down in 1921, and as an additional handicap imposed extremely onerous conditions from which our competitors in other forms of transport are entirely free. In spite of this, in those disastrous pre-war years when we received so poor a return on our capital, we spent immense sums on new plant, equipment, track, and signalling. Thanks to this expediture our line and equipment at the outbreak of

war, were in a higher state of efficiency than at any time in our history. This expenditure on development, the fruits of which did not accrue to you but to the whole community, was the profit motive in reverse. The nation, not we stockholders as such, reaped a rich harvest where we had sowed.

In the peace years before the war, when the civilian passenger or shipper of freight was our sole preoccupation, we—the British railways—provided a service which was the most comfortable, the safest and, on average, among the fastest in the world. Then came the war, and immediately the whole picture changed. We civilians became a very minor consideration. War and its demands necessarily had priority, its every requirement was immediately satisfied at no matter what cost of human effort or inconvenience.

How did we carry out our share in the immense effort this country made to achieve victory? I have already referred to our war record when we ran 205,000 special trains carrying 26,000,000 officers and other ranks. In addition, we provided special accommodation on the regular trains for over 263,000 parties of personnel, and the position was rendered still more difficult by the immense number of men and women travelling on leave, and the large number of special trains for prisoners of war, and for the conveyance of personnel to the demobilisation and dispersal centres.

Tributes from War Leaders

At the celebration of the twenty-first anniversary of the four main-line railway companies of Great Britain, Lord Leathers, the then Minister of War Transport, said: "The railways are still the mainstay of the inland transport system of the country and as such are an indispensable part of the military machine. . . . During the blitz the railways took very many hard blows, but they showed a remarkable toughness and resilience which will always redound to the credit of the railways as an institution. . . . Few people seem to realise what the extent of the railways' achievement is."

On the same occasion, in a message received from Mr. Winston Churchill, the then Prime Minister, he said: "I should like to take the opportunity of expressing to the railway managements and to every railway employee the nation's thanks for the highly efficient manner in which they have met every demand made upon them during the last four years."

At the same time we received messages from Mr. A. V. Alexander, the then First Lord of the Admiralty; Sir James Grigg, the then Secretary of State for War, and Sir Archibald Sinclair, then Secretary of State for Air: "During the war the railways have excelled themselves, and the magnificent service they rendered during the heavy air raids was a triumph of organisation, devotion to duty and outstanding skill."

These are Government pronouncements. Let me read an extract from a letter written last month by Mr. Ellis Hunter, of the British Iron & Steel Federation: "On behalf of the Iron & Steel Federation I should like to express my very sincere appreciation of the manner in which our traffic has been handled by the railway companies during the war period. Notwithstanding the difficulties under which the railways worked, consequent on enemy action, and the vast increase in traffic to be dealt with, no steel works had to shut down or seriously curtail its output through the lack of transport of raw materials."

The Government has not shown what advantage would accrue to the users of the railways by the transfer of your property, and its obligations, to national ownership. There are vague references to national ownership overseas but a study of conditions and results under such ownership affords no support to the assertion that national ownership is appropriate here. Generally speaking the experience of nationally-owned and operated railways is a direct refutation of the claim that there is any benefit to the community in public ownership. Quite the reverse!

That is our case and we await the Government's reasoned argument in support of their proposal.

Post-War Arrangements

We are continually pressing forward with plans for the restoration and improvement of our post-war facilities. They include not only extensive and ambitious programmes of new works and the overtaking of wartime arrears, but the introduction of many new schemes for improved efficiency. Large stations, as for example, Euston, Liverpool (Lime Street and Exchange), Manchester (Victoria and Exchange), Barrow (Central), Coventry, and Bury (Bolton Street), will be modernised and equipped with every sort of equipment for facilitating the arrival and departure of passengers. Public amenities, such as waiting rooms, inquiry offices, dining and tea rooms will be on most modern lines.

Local Authorities throughout the country are busy with post-war planning schemes and development. The company has assisted wholeheartedly. Informal meetings have been held at which the ideas of both parties have been freely discussed. These contacts have undoubtedly proved of mutual benefit and the company's desire to co-operate has been appreciated.

Before I sit down I wish to express the great appreciation of all us proprietors of the work of our President, Sir William Wood, the vice-presidents, chief officers, and of those loyal members of the staff who, through all the difficulties and hardships of the past year, have never spared themselves in their efforts to maintain as far as was humanly possible the high standard of operation that is the tradition of this railway. Until we get back the large number of our trained personnel still in the services there will be a very heavy strain on those who are left to carry on. They have given immediate and ungrudging response to every call made on them, and they have earned our sincere gratitude for what they have done.

I now move:—"That the report now read, with the statement of accounts, be adopted." I ask the Deputy-Chairman, Sir Robert Burrows, to second the resolution.

Sir Robert Burrows: Mr. Chairman, my lords, ladies, and gentlemen, I have great pleasure in seconding the resolution.

The Chairman: Before putting the resolution to the meeting I shall be glad to afford the usual opportunity for any remarks which any of you may wish to make. I ask each speaker to give his or her name for the purpose of record.

Stockholders' Remarks

Councillor Wilson congratulated the Chairman on his speech. The Government could not make a better job of the railways than had been done during the war. Stockholders had sacrificed their dividend for years so that the railway could be kept in good condition. He was not concerned about his capital invested in the L.M.S.R. He advised stockholders not to sell their stock. He thanked the stockholders for the support they had given him during the last eighteen years on railway policy, especially on the matter of "penny a mile" and "cash on delivery," and also the Directors for their tolerance and sympathy on many occasions.

Committee of Stockholders Suggested

Mr. Dickinson suggested that a representative committee of the stockholders should be set up, which could always be ready for immediate consultation with the directors in a matter of great urgency. If the stockholders had such a committee they would be able to know what proposals were being made and would have the opportunity of either assenting to or dissenting from them.

Sir John Barlow, M.P., said that it seemed to him that the fight against nationalisation in general—and there had been far too little fight—had been far too negative. It should be possible to organise public opinion. He did not believe that just putting forward the views which they had heard and issuing the booklet was going to stop nationalisation for a moment. He asked the board to organise a great fight, and do it quickly.

Sir Charles Stuart-Williams recalled that the Chairman had said that the Government wished to take over the air services on the basis of physical assets. If that principle was applied to the present case of the railways as a whole, a very good bargain would be made by the stockholders, as the replacement costs at present prices were more or less double the figure in the railway's books. He thought that something should be done towards the formation of a small committee of stockholders, representing not only the big investment interests but also the smaller men.

Effect of Monopoly

Mr. William Parker said that, from the consumers' point of view, if nationalisation went through, they would be up against the biggest monopoly in the country. There was only one monopoly, and that was the Post Office. In 1939 it put its rates up from 40 per cent. to 100 per cent., and they were still up. Cable & Wireless was not a monopoly, and it put its rates down.

Mr. Inglefield suggested that it was necessary to make people friendly to the railways. He hoped directors representing business interests would organise mass meetings all over the country and voice the protests of the shareholders against the nationalisation of the railways and, if possible, get in the general public to assist.

Mrs. Olive Matthews said the L.N.E.R. had what it called "Darby and Joan" cottages for retired railway workers. Had the L.M.S.R. any such cottages, and, if not, would it consider providing some out of its very large benevolent fund?

Publicity Advocated

Commander Burton referred to the transfer of £500,000 from the contingency fund, and thought it might have been appropriated to an anti-nationalisation education fund. He suggested the setting aside publicly of a fund out of the revenue of the company so that the stockholders' interests might be protected by telling the public about nationalisation and what it really means and how, if the whole of the industry of this country were nationalised, we should rush faster and faster towards disaster.

Mr. Charles Shearwater hoped the Board would give favourable consideration to the payment of an interim dividend.

Mr. Greg referred to recent railway accidents. Two had occurred on the L.M.S.R., one at Lichfield (Trent Valley), and the other at Bourne End. In both cases, as a railway man of some experience, he considered these accidents were unnecessary.

Chairman's Reply

The Chairman: I will just deal first with the questions concerning nationalisation which have been raised. All of us up here are just as impressed with the urgency of the situation and the necessity for action as any of you ladies and gentlemen or the large body of stockholders who have not come to the meeting. This is rather a delicate question, however, and it is perhaps one that is not best discussed at this moment in detail, but we have got to put up a fight, and that we intend to put up a fight you may take for granted. I would like to have a talk with Sir John Barlow afterwards on the Parliamentary side of it, but what counts in politics, as you know, is the number of heads, not what is inside them. I was a Member of Parliament myself once, so I know. We have over a million people interested financially in railways, and we have two stockholders' associations in the railway world: one is represented here by Sir Charles Stuart-Williams, and the other by Mr. Scott-Adie; I am sure that any action they could take in the direction of stirring up the rather lethargic stockholders and directing them towards taking action, would get wholehearted support from this side of the table. Further, I would rather you did not press me to go at the moment.

With regard to what Mrs. Matthews said, this company has about 22,000 houses of its own of various kinds, and nearly half are occupied by ex-employees or their widows or their children, or some connections of that sort, and not by people on the active list of the railway; so that in effect some 10,000 are in a sense almshouses, because these people have not been dispossessed; and I may say that this action causes great inconvenience to the operation of the railway.

With regard to what Lt.-Commander Inglefield said about public relations, if I may say so, it is a very good idea, and it will be pursued. We have, perhaps, you may consider, in rather a mild way adopted this idea some time ago, but I agree that it is capable of development, and a good deal can be done in that connection.

Mr. Shearwater, what you say about dividends has, as a stockholder, my entire approval. That is one thing, you know, but to carry it out is not possible at this juncture, anyhow. I will not say what the ultimate future will be, and, as to what the Government's intentions are, we know no more on this side than anybody else in the room. They have not said as much as a whisper as to operation or financial terms or anything at all. I hope I have now dealt with all the points raised.

The Chairman then put the Resolution, which was carried.

The Chairman then moved, and the Deputy-Chairman seconded, the resolution for the payment of dividends, which was carried.

The Directors retiring were re-elected, and the Auditor was re-elected.

The Chairman: That concludes the business of the meeting today. I thank you very much for your attendance and especially for your patience in listening to me.

Sir Charles Stuart-Williams: None of us would like to go without expressing our indebtedness to Lord Royden, not only for his successful conduct of affairs in the last year, but for the courteous and obliging way in which he has conducted this meeting.

Councillor Wilson: I have very great pleasure in seconding that.

The Chairman: Sir Charles Stuart-Williams, Councillor Wilson, ladies and gentlemen, I thank you very much indeed for your kindness and for the way you have received this resolution. This is rather a trying moment for me as it is the last time on which I shall have the honour of addressing you here as your Chairman. For 37 years now I have been a director of railway companies. As long ago as 1909 I was put on the board of the then Lancashire & Yorkshire Railway, and ultimately on the board of this company. Thirty-seven years is a very long period of time, and I cannot help thinking that it is time for me now to retire and make way for fresh minds and perhaps fresh ideas, so that I take this opportunity, though with very deep regret, of saying officially goodbye.

That concludes the formal business. I will now give Mr. Scott-Adie the opportunity to move a resolution.

Informal Meeting

Mr. Scott-Adie: Mr. Chairman, you have been good enough to afford me the opportunity of submitting a resolution to the proprietors of this company, and I would like to read the terms of the resolution :—"That this meeting of the stockholders of the London, Midland & Scottish Railway Company is in full agreement with the opinion of the board that the nationalisation of the transport industry is not in the best interests of the country as a whole. Should, however, nationalisation be forced on the proprietors, then, in the opinion of this meeting, the only just basis of compensation is the capital value of their undertaking as an essential national asset."

Ladies and gentlemen, to deal with the question of the terms, the thought in the mind of every railway stockholder is compensation or confiscation. When you try to assess the value of this company it is an admitted fact that the fixed assets are worth at least twice as much as the full amount of the paid up capital. Now, to that you have to add a huge sum—£35 millions I think—invested in trust funds in respect of deferred wear and tear. In addition, you have a very large claim against His Majesty's Government—an admitted claim—in respect of excessive wear and tear. Then you have got your reserves and your contingencies, all of which have to be added to the value of your fixed assets. It is only if you go through the matter on that basis that you get a very rough idea of the true value of this company, and I maintain that in the event of nationalisation being forced on us—and it will be forced on us unless we are very careful—a true valuation of our assets would be the only fair basis of compensation, and any question of trying to use the imposed wartime agreement of 1941 as a yardstick for compensation would, in effect, be sheer confiscation.

(*The resolution was seconded*).

Mr. Scott-Adie: May I have your permission to put the resolution, Mr. Chairman?

The chairman: Yes.

(*The resolution was put and carried*).

Publications Received

Railway Track. By K. F. Antia. Bombay: New Book Company, 188/190, Hornby Road. 8¼ in. × 5¼ in. 380 pp. Illustrated. Price Rs. 12 net.—This book owes its existence to a discussion on suitable books at a meeting of the Bombay and Western India Branch of the Permanent Way Institution. It is valuable not only as a normal text book on track, but also because of the abnormal extent of the ground it covers, including a variety of information on ancillary subjects. As well as describing methods of construction and maintenance necessary for modern loads and speeds, principles of design are added in many instances. Though Indian practice is, naturally, predominant, it is not to the exclusion of that in other countries, and comparisons are made in some cases. The theory and practice of points and crossings receive special attention, and proofs are given of the formulæ used. A chapter is devoted to the important subject of the layout of traffic and locomotive yards, wherein the ordinary diagrams are supplemented by two folding blue prints. Organisation of maintenance and inspection with modern aids, such as the Hallade track-recorder—described in detail—and the G.I.P.R. track recording car, are examples of the scope of the work, which also includes chapters on bridge maintenance, signalling and interlocking, and measures for dealing with various emergencies: the manufacture, tests, and treatment of materials are also described. Ten instructive appendices add to the value of the work, which is fully illustrated by rather crude, but quite clear diagrams.

Our Railway History. By Rixon Bucknall. London: Published by the Author, 48 Woburn Place, W.C.1. 7¼ in. × 5 in., 148 pp., 122 illustrations, and folding coloured map. Price 15s.—This excellent outline history of the chief pre-grouping railways, originally issued in three paper-covered parts, has now passed to a revised and enlarged second edition, bound in green cloth, which fully justifies the claims already made for the work. The author is to be congratulated on the clear and concise way in which he has contrived to bring the salient facts of nearly a century of railway development within the limits of a single volume of moderate size. Great care has been exercised in the choice of the numerous illustrations, which in themselves form an admirable record of past days. Other interesting features are notes on the liveries of locomotives and rolling stock, some useful statistical information, and the excellent map showing the lines of the major pre-grouping companies. The book should form a welcome addition to the library of the student.

History of Travel and Communication. Book I—Travel. By L. Moakes, L.L.A. (Hons.), M.R.S.T. Bognor Regis: John Crowther (Educational) Limited. 8¼ in. × 5¼ in. 56 pp. Fully illustrated. Price 6s. —The great debt which modern civilisation owes to efficient transport is sometimes in danger of being overlooked by younger generations to whom adequate opportunities of studying the achievements of past years have never been afforded. Ample facilities have long been available for students of more mature years to approach the subject from a technical angle, but those of school age have had but few opportunities for realising the full truth of the saying "Transportation is Civilisation." It is, therefore, all the more gratifying to learn that this want has now been filled by a brief outline of the development of transport through the ages. Although no more than an introduction to the subject, suitable for junior forms, has been possible within the limits of fewer than 60 pages, it is, perhaps, not too much to hope that this little book will stimulate interest to an extent that will pave the way for wider reading in after years. A companion volume on communications is now in preparation.

Southern Railway Electrification

A paper entitled "The Electrification of the Southern Railway" was read to the Southern Railway Lecture & Debating Society on February 14 by Mr. S. B. Warder, Assistant (New Works) to the Chief Electrical Engineer.

Mr. Warder opened his lecture by showing a film illustrating the basic principles of electro-magnetic theory. Reviewing the various systems of electrification in use or projected by pre-grouping constituents of the Southern Railway, Mr. Warder said that the decision to adopt the 660 V. d.c. system as standard for the company's suburban area had been based on established facts, and today there was no reason to doubt that it was correct. When the question of electrifying the main line to Brighton was reviewed, the use of a high-voltage overhead system was then considered.

The company already had 1,650 passenger vehicles equipped for operating on 660 V. d.c. third rail lines, and it was, therefore, decided to adopt the same system for all future electrification. The problem of distributing the power was overcome by supplying the third rail from unattended rectifier substations controlled from a central control room.

Alternative Substations

There were now 113 rectifier substations serving the electrified main lines of the Southern Railway, all supplied with power at 33,000 V. 50 cycles from the Grid and equipped with mercury-arc rectifiers. The interconnections were arranged so that, should one substation become unserviceable, the load could be taken by adjacent substations. Originally the equipment was mounted out of doors, partly because of the risk of fire from the oil used for arc-quenching at switch contacts. Now, however, new types of switches had been developed which required very little oil, and the equipment was being installed indoors.

The output from the substations was fed to the conductor rail, which consisted of continuously-bonded mild steel rail supported on porcelain insulators, which were fixed to the sleepers on whichever side of the four-foot way was more convenient. The negative return circuit was formed by the running rails, which were all specially bonded and connected to the negative point at each substation.

The motor coaches of the suburban trains each had one motor bogie equipped with two 275-h.p. motors. In the six-coach and five-coach fast trains there were two motor bogies in the motor coaches, each with two 275-h.p. motors. The motor coaches of the four-coach trains had one motor bogie with two 275-h.p. motors of a type similar to those in the five-coach and six-coach sets. All trains now had electro-pneumatic control gear.

Mr. Warder referred also to the trial electric locomotives built primarily for freight service, Nos. CC.1 and CC.2. The former was now in regular service between Norwood and Chichester and had been averaging six to seven thousand miles a month. No. CC.2 was undergoing trials with passenger vehicles between Victoria and Brighton.

During the war the most serious damage sustained by Southern Railway electrification installations was the loss of a chimney and damage to the boiler house at Durnsford Road, which reduced the capacity of the station by some 50 per cent. for several months. Damage occurred at substations on 63 occasions, the most serious being the complete destruction of the Streatham rotary converter substation. Cable damage was the most frequent result of enemy action, 379 incidents having occurred. In spite of forecasts that enemy action might paralyse the Southern Railway electrified system, said Mr. Warder, "although we were down a few times we were never out."

English Electric Co. Ltd.

The annual general meeting of the English Electric Co. Ltd. was held in London on February 28, Sir George H. Nelson, Chairman & Managing Director, presiding.

The Chairman, in moving the adoption of the report and accounts, said the trading profit for the year was £591,031, being £6,258 greater than in 1944, and after paying interest on the 4 per cent. debenture stock, directors' remuneration, trustees' fees, and depreciation, the profit carried to the balance-sheet was £442,668, which was £7,684 more than last year. When the carry forward from 1944 was added to this former figure there was available £530,538, which the board recommended should be dealt with in the following manner—namely, £100,000 to general reserve, and the payment of the preference dividend together with a dividend of 10 per cent. on the ordinary stock, leaving a balance to be carried forward of £120,793, against the £87,870 brought in.

They were again unable to recommend an increase in the ordinary dividend, in view of the severe restriction placed on retainable earnings by the Excess Profits Tax, to which the company was especially vulnerable.

The company was determined to build up its production for home and export at the earliest possible moment, but the speed of this "build up" was dependent upon the ability of the Government to make available suitable labour, and nobody else could be blamed for any delay. Unfortunately the company was still losing young specially trained craftsmen to the Forces. All the speeches in the world crying for production and exports would not produce anything unless this basic problem of making available a balanced flow of the technicians and other necessary workers in sufficient numbers was solved.

The company's order book was much greater than ever before and ran into many millions of pounds. Their immediate problem was to obtain the necessary labour to use fully their existing resources, which at the moment were operating only at about 55 per cent. of capacity.

The report and accounts were unanimously adopted.

Romney Hythe & Dymchurch Railway Re-Opened

The restoration of public traffic on the Romney Hythe & Dymchurch Railway on March 2 was preceded on March 1 by an official re-opening ceremony. This 15-in. gauge light railway was taken over by the War Department during the war years and used for military traffic until two years ago, from which time until last October, when work on restoring the line for public service began, it had remained in the department's possession.

The inaugural train was despatched from New Romney Station by the Mayor of New Romney, who cut a tape across the line. The Mayor of Hythe admitted the train to Hythe Station by cutting a tape, and made a short speech of welcome to the visitors.

At a luncheon after the opening journey, both mayors welcomed the restoration of a public train service as a sign of more normal times ahead, and spoke of the source of happiness and interest which the railway had been to many thousands of holidaymakers.

Mr. J. T. Holder, Manager of the railway, acknowledged the help given to the company in restoring the line by the Southern Railway, particularly by the Stores Department, and by the Ministry of War Transport. The Southern Railway was represented at the luncheon by Mr. S. W. Smart, Superintendent of Operation, and Mr. J. C. Dann, Assistant Divisional Superintendent, London (East), representing Mr. R. M. T. Richards, Traffic Manager. Brigadier H. L. Woodhouse, Deputy Director of Transportation, attended from the War Office.

Until June 1 the company is providing a service on Saturdays only, at hourly intervals during most of the day. It is hoped to have the extension from Hythe to Dungeness open by Whitsun.

The company owns nine steam locomotives, one petrol locomotive, and a petrol railcar for inspection duties. The steam locomotives weigh approximately 8 tons, are of the 4-6-2 and 4-8-2 types, and can haul trains of 100 passengers or goods trains up to 100 tons in weight. Most of them were built by Davey Paxman & Co. Ltd., of Colchester. Wartime freight included pipes for "Pluto," the cross-Channel petrol pipeline, which follows the railway alignment between Hythe and Dungeness. Removal of the buried pipes with a bulldozer has caused damage to sleepers on that section of the line, but restoration work is actively in hand. A heavy wartime passenger traffic also originated among troops stationed in the district, who enjoyed a flat rate fare of "2d. all the way." Camouflage netting along the lineside fences still recalls the wartime days, as do some portions of crashed aircraft on Romney Marsh, which often dwarf the miniature trains.

Staff & Labour Matters

Carriage & Wagon Examiners in Hump and Gravitation Yards

The Chairman of the Railway Staff National Tribunal recently has given his decision on a claim by the National Union of Railwaymen that the carriage and wagon examiners employed in hump or gravitation shunting yards shall be paid a special allowance of 5s. a week.

The claim was submitted for decision on its merits and not as an issue "involving interpretation," and the parties in their submission agreed that the decision on the matter should be final and binding.

It was contended by the Union that R.S.N.T. Decision No. 17 (Ch.), which was made on a claim "that the rates of pay for each class of shunters employed at hump or gravitation yards and sidings should be increased by 5s. a week, also such men should be placed on a standard working day of six hours," recognised that there were important differences between the workmen employed in a flat yard or a hump and gravitation yard so far as shunters were concerned, and that the difference in shunters' duties which the decision quoted was claimed to recognise was reflected by additional work and risk to carriage and wagon examiners when working in hump or gravitation yards warranting a special allowance of 5s.

It was contended on behalf of the companies that the decision above quoted established that, although some additional recognition was justified for a particular class of shunter in the hump or gravitation yards because of the circumstances in which that class of shunter worked, such

recognition was not justified in respect of shunters generally in such yards, and that the question for consideration, therefore, in the present case, was whether the duty of examiners as performed in hump and gravitation yards was so differentiated from the duties of examiners in general as to justify any differential in payment. The companies further contended that they were not so differentiated and that no additional payment was justified in their favour.

In his statement the Chairman says that he has given careful consideration to the statements and contentions of the parties and he finds that the claim made on behalf of the carriage and wagon examiners is not established, and so awards.

Railwaymen's Bravery

The following are notified in the Third Supplement to *The London Gazette*, dated February 19, as having received King's commendations for brave conduct in connection with services when ammunition trains caught fire :—

Mr. Jess Henry Beard, driver (Colwick), L.N.E.R.

Mr. Thomas Robert Gibbons, passed fireman (Gorton), L.N.E.R.

Mr. Paul Hall, driver (Gorton), L.N.E.R.

Mr. Frederick Hodges, fireman (Gorton), L.N.E.R.

Mr. Albert Lawson, passed fireman (Colwick), L.N.E.R.

Mr. Alfred Mather, driver (Gorton), L.N.E.R.

Mr. William Spendlove, guard (Colwick), L.N.E.R.

Questions in Parliament

Ashford-London Railway Service

Mr. E. P. Smith (Ashford—C.) on February 26 asked the Minister of War Transport if he would state the reasons for the recent increasing unpunctuality of the trains between Ashford, Kent, and London.

Mr. Alfred Barnes stated in a written answer : The average late arrival of trains on this route has, during the last month, been reduced by more than one half, to 8 minutes. The Southern Railway is giving the closest attention to the working of this route with a view to effecting further improvements. Apart from the difficulties which are common to all railway services at present, this route is particularly affected by the running of special leave and other trains for the Forces overseas. Up to 30 such trains are run daily and their timings are dependent on the arrival of cross-Channel steamers, which is irregular.

Norwich-Liverpool Street Service.

Lt.-Colonel D. C. Walker-Smith (Hertford—C.) on February 21 asked the Minister of War Transport why the 9.30 a.m. train from Norwich to Liverpool Street, on Sunday, February 10, had been an hour late; and whether that unpunctuality was normal with that particular train.

Mr. Alfred Barnes, in a written answer, stated: This train was 62 minutes late on Sunday, February 10. The causes were engine trouble and delays due to single-line working between Hatfield Peveril and Chelmsford necessitated by track relaying operations. This delay was abnormal. The average delay on four of the previous five Sundays was 17 minutes. On the other Sunday the train was 67 minutes late owing to a brake failure.

Colonel Walker Smith, on February 21, also asked the Minister of War Transport why there had been no heating in the carriages of the 9.30 a.m. train from Norwich to Liverpool Street on Sunday, February 10; and whether it was normal for there to be no heating on that train.

Mr. Alfred Barnes stated in a written answer: The railway company's records show that steam heating on this train on February 10 was maintained at full pressure between Norwich and Ipswich. From Ipswich to Liverpool Street the pressure fell to 50 per cent. on account of engine trouble. Adequate heating is normally provided on this train.

Railway Employees in Armed Forces

Mr. G. H. R. Rogers (North Kensington—Lab.) on February 25 asked the Minister of War Transport what was the number of railway employees in the Armed Forces on January 31, 1946.

Mr. Alfred Barnes in a written answer stated: The number of employees from the railway companies and the London Passenger Transport Board serving with the Armed Forces at January 26, 1946, was 84,240.

London-Manchester Express Trains

Mr. Rhys Davies (Lancaster, Westhoughton—Lab.) on February 25 asked the Minister of War Transport whether he was aware that L.M.S.R. express trains between Manchester, Derby, Leicester and St. Pancras, which before the war had done the journey in less than four hours, now took nearly six; that they stopped then only three times as against ten now; and if he would arrange to improve services on that line in the near future.

Mr. Alfred Barnes stated in a written answer: Yes, Sir. Additional stops had to be introduced on the outbreak of war so that the number of passenger trains could be reduced. The process of restoring normal services has started and will continue as additional resources, particularly of staff and rolling stock, become available. Some of the intermediate stops between Manchester and St. Pancras are to be withdrawn as from May 6 next, when the summer timetable is introduced.

Euston-Macclesfield Railway Service

Air-Commodore A. V. Harvey (Macclesfield—C.) on February 25 asked the Minister of War Transport if he was aware that the 2.50 p.m. train from Euston to Macclesfield was always overcrowded, particularly on Fridays; and would he arrange for a relief train to be run, or, alternatively, for the 2.15 p.m. train to Manchester to stop at Macclesfield.

Mr. Alfred Barnes (Minister of War Transport): I am informed with a few exceptions that there have been seats for all passengers on this train during February, except on Fridays. A relief train is already provided on Fridays. The traffic does not justify the provision of relief trains on other days of the week.

Air-Commodore Harvey: Is the Minister aware that the relief train to which he refers does not stop on Fridays at Macclesfield, and if he takes a trip himself he will find as many as six people standing in the toilet departments. As conditions of travel are quite unfit for women and children, will he look further into this matter?

Mr. Barnes: Yes, Sir.

Restaurant-Car Service

Wing-Commander Rowland Robinson (Blackpool South—C.) on February 25 asked the Minister of War Transport on which main-line trains restaurant cars had been restored; in how many cases had the restaurant-car service not been restored; and whether, in order to meet the needs of the travelling public, he would arrange for a speedy restoration of such services to pre-war levels.

Mr. Alfred Barnes in a written answer stated: Before the war 870 trains included restaurant cars. Since last October, when the companies began to restore those facilities, 156 trains have been so equipped, and I am sending Wing-Commander Robinson a list of them. The companies are continuing to restore restaurant cars on other services as rapidly as they can without depriving passengers of seats and as staff and cars become available. Buffet and pantry cars for light refreshments are also being provided on a number of routes.

South Wales Docks

Mr. Peter Freeman (Newport—Lab.) on February 25 asked the Minister of War Transport whether he would arrange to secure that railway rates, warehouse and dock charges were placed on a similar basis in the South Wales ports as those in London and Liverpool, etc., so that shipping would not be diverted because of those differences.

Mr. Alfred Barnes stated in a written answer: During the war, railway rates have been increased by 16⅔ per cent. generally. The general increase in dock charges at the railway-owned ports in South Wales is 20 per cent. (7½ per cent. on certain coasting liners), a much lower figure than those authorised for London and Liverpool. To this extent, the competitive position of the South Wales ports is better than before the war, and I am not prepared to require general reductions in the rates and charges affecting them. The Great Western Railway Company is, however, ready to investigate the railway rates for any specific traffic for which there is a prospect of export through the ports, and local discussions on these lines are already taking place.

Transport Situation in Nigeria

Sir Ralph Glyn (Abingdon—C.) on February 19 asked the Secretary of State for the Colonies whether he was satisfied that the inland transport arrangements made in West Africa were adequate to convey the 1945-46 ground-nut harvest from Nigeria, estimated at 300,000 tons, for shipment to the United Kingdom; whether all the locomotives awaiting repair were having spares shipped out as a priority requirement; and if the stacks of food awaiting transport were properly protected against the rainy season.

Mr. George Hall (Secretary of State for the Colonies) in a written answer stated: A review of the transport situation in Nigeria was recently held to ensure that there will be no hold-up of shipments of all essential foodstuffs from that territory. The shortage of locomotives in Nigeria is being met by the transfer of six locomotives from the Gold Coast and extra motor lorries and tyres are also being supplied. The provision of spares for locomotives is being given priority. These measures should achieve the end desired, but a close watch will be kept on developments. Measures taken to secure adequate protection of oilseeds awaiting transport include the erection of supplementary permanent stores, the conversion of military hangars and huts, and the provision of 1,000 tarpaulins from the United Kingdom.

Exports of Locomotives

Lieutenant W. Shepherd (Bucklow—C.) on February 27 asked the President of the Board of Trade how many locomotives had been exported to Europe on loan or sale since the end of the war.

Mr. J. W. Belcher (Parliamentary Secretary to the Board of Trade) in a written answer stated : Fifty-two main-line and thirty-four light locomotives were exported to the Continent of Europe from May to December, 1945. No later figures are yet available.

Surplus Machine Tools

Mr. E. G. Willis (Edinburgh North—Lab.) on February 27 asked the Minister of Supply

& Aircraft Production what steps were being taken to ensure that surplus machine tools were made readily available for re-equipping industrial undertakings ; and what was the procedure adopted in their disposal.

Mr. A. Woodburn (Parliamentary Secretary to the Ministry of Aircraft Production) : wrote in reply : For details of the procedure I would refer Mr. Willis to the reply given to Colonel Erroll (Altrincham—C.) on August 22 last. Machines are sold direct to users from the site at selected factories where the quantity is sufficient to justify instituting a temporary sales centre, and, in order to give equal opportunity to all industrialists requiring machines for their own use, offers by them to purchase are dealt with in rotation at both the permanent disposal centres and at the special site sales. Announcements of special site sales are made in all the disposal centres and by notices in the technical press. Up to February 16, a total of 17,511 machines to a value of £4,802,428 had been sold in this way.

C.P.R. New Reservations and Inquiry Bureaux

The Canadian Pacific Railway recently placed in use at Windsor Station, Montreal, improved reservations and train-inquiry bureaux. In the reservations bureau there is a cabinet file of carriage diagrams which moves along an 18-foot track between 16 operators; this replaces the usual stationary equipment. The track is mounted on an operating table, at which the staff make up carriage accommodations from calls coming to them over a switchboard of a new type. The table is fitted with a 100-key system consisting of 36 key boxes and a total of 180 communications switches for the use of the operators.

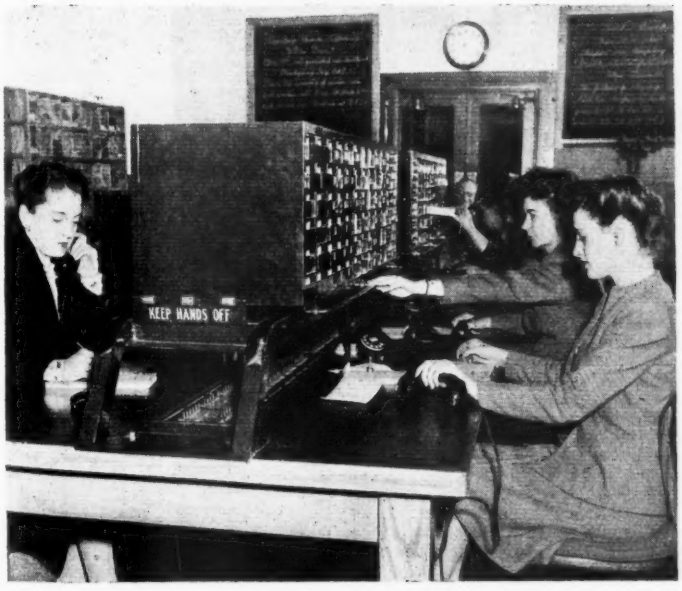
The cabinet file contains location diagrams of all C.P.R. sleeping and parlour cars in regular and extra line service. It is divided into two units, one for sleeping cars and the other for parlour cars, each containing 60 drawers for carriage diagrams and an alphabetical file for reservations requests made by telegram. Although each weighs 300 lb., the units operate with finger-tip control. They can be coupled, so that, in slack hours, one person can handle the whole plan without changing position. It is expected that the new system will increase the speed of the handling of reservations by at least 50 per cent.

The new inquiry bureau for train times and rates is adjacent to the reservations room, which has the latest telephone equipment for the convenient and rapid handling of inquiry calls, of which a peak of 196,516 was reached last July. There are 19 operators on this staff.

Another feature of the bureaux is the inter-departmental pneumatic tube which takes care of 1,000 telegrams daily, formerly delivered and despatched by hand.

Both bureaux are housed in sound-proof quarters with the most modern style of fluorescent lighting. Blackboards for the noting of important information have been installed. For the convenience of the staff specially-constructed lockers, and lounge rooms, have been provided.

Accommodation-Booking Equipment, Montreal, C.P.R.



General view of mobile cabinet file of carriage diagrams in use (see accompanying article)

Notes and News

Chief Draughtsman Required.—A Chief Draughtsman is required, able to take charge of London drawing office dealing with diesel locomotives and railcars. See Official Notices on page 267.

G.W.R. Birmingham Services.—In our last week's issue, by a printer's error, the G.W.R. restaurant car train leaving Wolverhampton at 4.25 p.m. was shown as arriving at Paddington at 7.45 p.m. instead of 7.5 p.m.

Vickers Limited.—The following dividends were declared at a board meeting of Vickers Limited held on February 21: 2¼ per cent., less income tax, on the preferred 5 per cent. stock; 2¼ per cent., less income tax, on the 5 per cent. preference stock; 2½ per cent. free of income tax up to 5s. in the £ on the cumulative preference stock. In all cases the foregoing dividends will make a total distribution of 5 per cent. for the year ended December 31, 1945. Payment will be made on March 22.

Super Oil Seals & Gaskets Limited.—Net profit after deduction of income tax and E.P.T. was £21,690, against £19,849 in the preceding year. A final dividend of 25 per cent. makes a total distribution for 1945 of 40 per cent., the same as in 1944.

Overseas Employment.—An engineering draughtsman is required by the Iraqi Government Railway for three years in the first instance. Candidates must have had considerable experience in a large drawing office and possess a sound knowledge of building construction, including the design of steel and reinforced concrete bridges and structures. For full particulars see Official Notices on page 267.

Government-Owned Surplus Manufactured Civilian Stores.—Up to December 31, 1945, sales of Government owned surplus manufactured civilian stores in the United Kingdom amounted to about £35¾ million. This figure is made up as follows: Consumer goods, including cloth, £9½ million; plant, machinery, aircraft (sold for commercial use), motor vehicles, boats and so on, £6¾ million; machine tools, £5½ million; other goods mainly used by trade and industry, for example, components, scrap, builders' materials, £14 million.

Tecalemit Limited.—At the annual general meeting of Tecalemit Limited, held in London recently, the Chairman, Mr. S. G. Gates, said the company foresaw wide expansion in the future as its wartime work for service departments had familiarised a wider circle of manufacturers with the merits of its products. Production was now flowing smoothly, and orders for all the company's standard products were highly satisfactory. The company had developed a special pump for lubricating the gas turbines of jet-propelled aircraft, which he thought would be sure of a place in the general field of high-pressure lubrication of machinery.

Width and Laden Weight of Public Service Vehicles.—Notice has been given that it is proposed by the Minister of War Transport, after the expiration of at least forty days from February 11, to make regulations to permit the use in certain circumstances of public service vehicles of an increased width, and to increase the maximum laden weight of public service vehicles. Copies of the draft regulations may be obtained on application to the Assistant Secretary, Road Transport Division (B), Ministry of War Transport, 2, Fitzmaurice Place, London, W.1, to whom any observations or suggestions in connection with the draft regulations should be sent in writing.

L.M.S.R. Extension of Time Application.—The London Midland & Scottish Railway Company is applying to the Minister of War Transport for an Order under the Special Enactments (Extension of Time) Act, 1940, extending by three years in the case of certain works, and by two years in the case of certain lands, from October 1, 1946, the time now limited by the London Midland & Scottish Railway (Extension of Time) Order, 1943 (S.R. & O. No. 1494). A copy of the draft application may be inspected at the office of the Chief Solicitor, London Midland & Scottish Railway Company, Euston Station, London, N.W.1, from whom

copies may be obtained, price 6d. each, and to whom any representations against the application must be submitted not later than March 9.

Hexagon Die Nuts.—The British Standards Institution, in collaboration with the manufacturers of screwing tackle, has prepared a schedule of dimensions relating to hexagon die nuts. This schedule gives the overall dimensions of 17 sizes of nut blanks and lists the particular screw threads which are associated with each size of blank. The schedule is published as Amendment No. 1 (P.D. 401) to B.S. 1127 (Circular Screwing Dies). Copies are obtainable, free, on application, accompanied by a stamped addressed envelope, to the British Standards Institution, 28, Victoria Street, London, S.W.1.

C.P.R. All-Welded Boilers.—A locomotive equipped with an all-welded boiler, instead of one of standard riveted construction, was delivered to the Canadian Pacific Railway recently by the Montreal Locomotive Works Limited. The new engine, No. 1216, will complete a 1,000-mile test running before going to the company's lines in western Canada. One more engine of the same class, designed for post-war replacement of older motive power, also will be equipped with a boiler of this type; it will remain in the east of Canada. The design of the boilers was approved by the Board of Transport Commissioners.

Ministry of War Transport (L.N.E.R. Filey Camp Branch) Order, 1946.—Notice has been given that the Minister of War Transport has approved and proposes to make and issue to the London & North Eastern Railway Company an Order authorising it to construct certain railways and to acquire compulsorily certain lands therefor in the Parish of Hunmanby in the Rural District of Bridlington and in the Urban District of Filey in the East Riding of the County of York. Printed copies of the proposed Order may be purchased at the office of the Chief Legal Adviser, London & North Eastern Railway, 4, Cowley Street, Westminster, S.W.1, price 1s. each.

Spain to Electrify Railways.—Long-term plans for the complete electrification of all Spanish broad-gauge railways, now nationalised under the name of R.E.N.F.E. (Rea Nacional de Ferrocarriles Espanoles) have been approved by the Spanish Cabinet, a Reuter's message announces. The first stage of the plans affects some 4,500 km. (2,800 miles) of a total of about 13,000 km. (8,000 miles), but no mention is made of how long it will take to complete the scheme. Plans are also being drawn up for the nationalisation of the electrical industry. The railway conversion plans will be largely dependent on a gradual increase in the number of electric power plants, for these are at present barely able to cope with existing consumption.

Protection Against Corrosion.—Work is being carried out, in connection with the protection required when steel is subjected to various conditions of exposure, with a view to establishing a suitable method of testing which can be applied to any protective treatment which has been given to steel. Pending the completion of this work and the issue of the relevant British Standard, a memorandum has been prepared describing various methods which can be used for protection of light gauge steel, and giving recommendations as to the particular points which need to be observed. Copies of the memorandum (reference PD. 420), which is intended essentially for general guidance, may be obtained on application to the British Standards Institution, 28, Victoria Street, London, S.W.1, price 1s.

Westinghouse Brake & Signal Co. Ltd.—For the year ended September 30, 1945, the profit on trading, dividends, and interest was £319,086, compared with £408,519 in 1943-44. After deduction of excess profits tax and income tax, and the charging of £104,873 to contingencies in respect of charges relating to a pre-war contract, the balance for the year is £195,886, compared with £161,894. A dividend of 10 per cent., plus a bonus of 4 per cent., is declared as in the previous year, leaving £96,192 to be carried forward as against £93,872 brought in. Allocations of £50,000 are made to general reserve, £15,000 to pensions account, and £50,000 to provision for contingencies.

Jonas Woodhead & Sons Ltd.—At the annual general meeting of Jonas Woodhead & Sons Ltd., on January 15, Captain Allan G. Kyle (Chairman & Managing Director) said that the company was favourably placed in the changeover from war to peace, in that its products were substantially similar, but serious problems awaited it. The war effort had placed an unnatural and overwhelming strain on its plant, but its efforts to bring its post-war programme of reconstruction and modernisation to fruition within a reasonable time, and at a known cost, would be hazardous. It was faced with remote delivery dates, quotations qualified by provisos, and the fact that today's prices of raw material, fuel and labour were not dependable.

London Transport Research Activities.—The London Transport laboratories at Chiswick are engaged upon numerous types of research aimed at improving the efficiency and convenience of the board's services. Among the tasks of the chemical section are the testing of various types of safety glass, the investigation of the suitability of plastic-leather cloth for covering bus seats, and the testing of synthetic paints for use on vehicles. In another section, experiments are being made in improving the legibility of illuminated destination signs for buses. During the war, the chemical section installed and operated an electro-deposition plant, comprising nickel and chrome vats, which was used for building up worn engine and chassis parts that it was impossible to replace.

Brown Bayley's Steel Works Limited.—At the ordinary general meeting of Brown Bayley's Steel Works Limited held on December 20, the Chairman, Mr. E. Hugh Armitage, said their firm's contribution to the war effort could be judged by maximum outputs of improved qualities of material, high production per man-hour and the efficient uses of available raw materials, but he considered it more in the spirit of the times to mention the part they could play in the future. Their immediate concern was the contribution they could make in rebuilding this country's prosperity, and despite the strain imposed by war output on the plant and the severe damage suffered by enemy action, their works were now in better shape and balance to serve the present needs of industry, but the constant need remained further to equip their works if they were to maintain a reputation not only for meeting the further increasing demand for the highest quality steels, but for making a contribution towards technical development. Their manufacturing plant and laboratories, supported by an able body of staff and highly-skilled workpeople would enable their company to be of the highest service in the future.

Roof of Edinburgh (Waverley) Station.—The L.N.E.R. states that work has been started on the restoration of the glass in the roof of Waverley Station, Edinburgh, which was removed early in the war as a precautionary measure to avoid the risk of injury to passengers in the event of enemy air attacks. The total area of the

British and Irish Railway Stocks and Shares

Stocks	Highest 1945	Lowest 1945	Prices Mar. 5, 1946	Prices Rise/Fall
G.W.R.				
Cons. Ord.	60⅜	47½	55	+ ½
5% Con. Pref. ...	124½	104½	110½	+ 3½
5% Red. Pref. (1950)	107⅜	101¼	103	—
5% Rt. Charge ...	137½	120	126½	—
5% Cons. Guar. ...	135½	117	120½	—
4% Deb.	118	106	112	—
4½% Deb.	119½	108	112½	—
4½% Deb.	124½	111½	117	+ 1
5% Deb.	138	124	127	+ 1
2½% Deb.	83	74½	83½	—
L.M.S.R.				
Ord.	33	23¼	28½	+ ½
4% Pref. (1923) ...	65	50	54½	—
4% Pref.	80⅜	69½	75½	—
5% Red. Pref. (1955)	106½	99½	97	— 4½
4% Guar.	106½	97	100½	+ ½
4% Deb.	110½	102	106½	+ ½
5% Red. Deb. (1952)	110½	103½	106½	—
L.N.E.R.				
5% Pref. Ord. ...	8½	5½	6½	+ ½
Def. Ord.	4½	2⅜	3½	+ ½
4% First Pref. ...	62½	49½	53½	—
4% Second Pref. ...	33½	24½	29	+ ½
5% Red. Pref. (1955)	103	96	97	—
4% First Guar. ...	104½	95	93	—
4% Second Guar. ...	97	89½	90	—
3% Deb.	91⅜	82½	91	—
4% Deb.	109½	101	106	—
5% Red. Deb. (1947)	103½	100	101	—
4½% Sinking Fund Red. Deb. ...	106⅜	103	103½	—
SOUTHERN				
Pref. Ord.	79½	63	73	+ 1
Def. Ord.	27	20¼	22½	+ 1
5% Pref.	124½	104	110½	+ 3½
5% Red. Pref. (1964)	117	107	108½	—
5% Guar. Pref. ...	135⅜	117	120½	—
5% Red. Guar. Pref. (1957)	117	106½	108½	—
4% Deb.	117	104½	111½	—
5% Deb.	137	124	126½	—
4% Red. Deb (1962-67)	112	104½	106½	—
4% Red. Deb. (1970-80)	113½	104	107½	—
FORTH BRIDGE				
4% Deb.	106	103	103	—
4% Guar.	106	101	102	—
L.P.T.B.				
4½ "A"	125	117	123½	—
5% "A"	135	127	133½	—
3% Guar. (1967-72)	100	97½	102	+ 1
5% "B"	125½	115	117½	—
"C"	70	58	59	— 1
MERSEY				
Ord.	37	31½	31xd	— 1
3% Perp. Pref. ...	72½	68½	71xd	—
4% Perp. Deb. ...	104½	104	103	—
3% Perp. Deb. ...	84	78½	81	—
IRELAND*				
BELFAST & C.D.				
Ord.	8½	6	7½	—
G. NORTHERN				
Ord.	34	24½	37	— 4½
Pref.	52½	42½	56	— 2½
Guar.	80	68	85	—
Deb.	97½	87½	101	— ½
IRISH TRANSPORT				
Common	—	—	92½	— ½
3% Deb.	—	—	103¼	+ ¼

* Latest available quotation

OFFICIAL NOTICES

CHIEF DRAUGHTSMAN required, able to take charge of London drawing office dealing with diesel locomotives and railcars of all types. Salary commensurate with ability.—Box No. 13, c/o *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Monday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

OVERSEAS EMPLOYMENT: ENGINEERING DRAUGHTSMAN required by the Iraqi Government Railway for three years in the first instance. Salary between I.D.40 and I.D.50 a month, according to qualifications and experience, plus high cost-of-living allowance between I.D.11½ and I.D.15 a month, according to salary and dependants. (I.D.1—£1.) The post is not pensionable, but there is a Provident Fund. Free passages. Candidates must have had considerable experience in a large drawing office and possess a sound knowledge of building construction, including the design of steel and reinforced concrete bridges and structures; or alternatively have had experience in a civil engineering drawing office on a British or Colonial railway and have a good knowledge of permanent way layout.

Written applications (no interviews), giving the following essential details: (1) Full name, (2) date of birth, (3) industrial training and experience, (4) name and address of present employers, (5) details of present work, should be sent to the Secretary, Overseas Department (Ref. 1603), Ministry of Labour and National Service, Norfolk House, St. James's Square, London, S.W.1.

Applications cannot be acknowledged.

Universal Directory of Railway Officials and Railway Year Book 1945-46

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In preparation—Order in advance now

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33, Tothill Street, London, S.W.1.

station roof extends to some 47,000 sq. yd., of which the glass was removed from 30,000 sq. yd. and felt and other roofing material substituted. The glass left in the roof was reinforced by netting or such material. The removal of the protective netting is now in progress, after which the glass to be restored will be placed in position, with the exception of several lanes over the running lines, which will be left open to facilitate the escape of steam from the station. It is estimated that this contract will take about two years to complete.

Bermuda Railway.—Holders of six-and-a-half per cent. first mortgage debenture stock of the Bermuda Railways Investment Co. Ltd. have been informed that, subject to the passing of the necessary legislation, the railway company has agreed to sell to the Government of Bermuda its assets, excluding cash, but subject to certain liabilities. The net proceeds of sale, it is stated, cannot be ascertained definitely until liabilities have been adjusted, but the directors are of opinion that the cash ultimately available for distribution should be equivalent to not less than 37½ per cent. of the nominal amount of the debenture stock of the investment company. It was reported from Bermuda on January 24 that the Assembly and the Council had passed the Railway Purchase Bill.

Ardente Voice Amplifier.—We have received from Ardente Acoustic Laboratories Limited, Guildford, Surrey, particulars of the "Portavox" voice amplifier, which is now available for reasonable delivery. This loud-speaker apparatus can be carried and operated easily by one man and the haversack containing the amplifier and battery can be worn comfortably for long periods. A compact hand microphone is fitted with a remote control switch for instant operation. Current consumption is low, with the result that many hours of continuous speech can be obtained from a single charge of the 15-amp.-hr. accumulator, and the speech range is from 300-350 yd. We are informed that a new design of "Portavox" will shortly be available for use when the haversack type is not suitable.

Mersey Docks & Harbour Board.—At the annual meeting of the Mersey Docks & Harbour Board held on December 13, at Liverpool, Sir Thomas A. L. Brocklebank, the Chairman, spoke of the achievements of the port during the war years. The total general cargo, excluding oil and coal, handled during the war was over 70 million tons. On at least three occasions over one million tons were handled in a single month, despite the blackout and the very considerable reduction in facilities as a result of air-raid damage. He thought it a record of which they may be justly proud, and credit goes to all their staff, the railways, road transport and last, but by no means least, to the dock workers for a very fine performance. The board's accounts for the year contained an interesting analysis of the financial ups and downs of the war years—down to a very low ebb about the time of the 1941 blitz, and thence steadily rising until the preparations for the North African invasion, to a peak around the time of "D" day. With the advent of peace, every effort was being made to attract new industries to the Port Area and several promising proposals were under active consideration.

McNamara & Co. Ltd.—The report and accounts for the year 1943 of McNamara & Co., Ltd., have now been issued. The report states that since March 1, 1943, operations have been controlled by the Ministry of War Transport and revenue has been derived chiefly from the amount payable by the Ministry under the control contract. Subject to claims by Ministry of War Transport, the net profits (including £1,456 profits attributable to previous years) was £34,772, which with the balance of £3,325 brought forward, makes £38,097 available for distribution. The directors have provided reserves for income tax, N.D.C., and reduction in value of assets of Fred. Cook (Transport) Limited, due to operation of E.P.T. amounting to £21,000; interim dividends for 1943 of 4⅛ per cent. and 8⅛ per cent. (less tax) account for £11,713, leaving £5,384, which directors recommend to be carried forward.

Contracts and Tenders

Mr. Bernard L. Oldfield, Sales Manager of the Motor Components Division of the Laycock Engineering Co. Ltd., has relinquished his position to join Hobbs Transmissions Limited.

The Bristol branch office of the British Aluminium Co. Ltd. (Head office, Salisbury House, London Wall, E.C.2) has been removed to 62, Queen Square, Bristol, 1 (telephone: Bristol 23957; telegrams: Britalumin, Bristol). The Branch Manager is Mr. F. H. Vince.

In November last Crossley Motors Limited announced the receipt of an order from the Netherlands State Railways for 500 48-seater diesel-engine single-deck bus chassis. The value of this contract was approximately £900,000. The Netherlands State Railways have now placed further large orders with the company. These contracts are for 425 38-seater single-deck bus chassis and 250 tractor chassis, the latter being specially designed to draw a trailer bus. The value of the new contracts is approximately £1,100,000. Delivery will be made during 1946 and 1947.

Below is a list of orders placed recently by the Egyptian State Railways:—

Arthur Balfour & Co. Ltd.: Hand taps, twist drills, etc.
Howell & Co. Ltd.: Crossheads, etc.
J. Stone & Co. Ltd.: Crossheads, etc.
Metropolitan-Vickers Electrical Export Co. Ltd.: Copper joint rings.
Guest, Keen & Nettlefolds Limited: Screws.
Thomas Turton & Sons Ltd.: Steel bars and spring laminations.
Standard Telephones & Cables Limited: Mixer panels.
Vulcan Foundry Limited: Frame plates.
Brown Bayley's Steel Works Limited: Tubes, joints, axles, and springs.
Tubes Limited: Steel tubes.
Superheater Co. Ltd.: Superheater elements.
Sentinel Waggon Works (Shrewsbury) Limited: Boiler tubes.
Stewarts and Lloyds Limited: Boiler and superheater tubes.
Boulton & Paul Limited: Wire ropes.
Colvilles Limited: Mild-steel sections.
P. & W. MacLellan Limited: Mild-steel channels.
Grafton Cranes Limited: Shunting cranes.
Imperial Chemical Industries Limited: Locomotive spares.
C. C. Wakefield & Co. Ltd.: Locomotive spares.
J. Stone & Co. Ltd.: Telephone and telegraph material.
Turner Brothers Asbestos Co. Ltd.: Asbestos packings.

Forthcoming Meetings

March 18 (*Mon.*).—The Permanent Way Institution, 39, Victoria Street, Westminster, London, S.W.1. 7 p.m. "The Construction of Earthworks and Bridges on the Chessington Line," by Mr. O. G. Williams, B.Sc., A.M.Inst.C.E. (S.R.).

March 19 (*Tue.*).—The Institute of Transport, at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. 6 p.m. "Passenger and Freight Train Organisation and Supervision," by Mr. A. Earle Edwards, M.Inst.T.

Railway Stock Market

General conditions in stock markets showed no particular change, and movements in most sections were small and indefinite, although the volume of business has been well maintained. Home and foreign political developments again had an unsettling influence; but generally the undertone of markets benefited from the increased strength of British Funds, led by 2½ per cent. Consols and Local Loans, the last-named at one time rising over par and touching the best level since 1908. There is persistent talk of a forthcoming new Government loan, possibly after the Budget. A number of further dividend increases, and hopes that tax reductions are in prospect, helped to impart steadiness to industrials. Shares of companies connected with the retail trades also improved on the hope that modification of the Government's "austerity policy" will continue. On the other hand, there was an easier trend in iron and steel shares, doubts having arisen whether the industry is outside the nationalisation programme as hitherto had been generally assumed in view of Government satements. Among Oils, Anglo-Iranian were depressed by the news from Persia earlier in the week.

The home railway market was helped by the favourable impression created in the City by Lord Royden's remarks at the L.M.S.R. meeting. In particular, the company's progressive programme, and the feeling that an anti-nationalisation campaign is likely to grow, assisted sentiment. Moreover there is confidence that in the event of nationalisation the companies will make every effort to secure a fair compensation basis for stockholders. Home rails were also helped by the belief that the basis of war damage liability will be fair to the companies. These and other factors tended to draw rather more attention to the large yields on junior stocks; expectations that statements at the rest of the annual meetings will create a good impression also assisted sentiment. There nas been a better tendency in prior-charges, particularly the senior preference stocks, partly in sympathy with the trend in British Funds. It is not contended from the point of view of stockholders that in the event of nationalisation not being put into effect, dividends at current rates could be maintained, particularly when it is borne in mind that payments for the current year in three out of four cases have benefited from withdrawals from contingencies reserves. On the other hand it is pointed out in some quarters that, taking as a basis for nationalisation compensation the average dividends paid during the past twenty years, junior stocks at current prices would be considerably undervalued. The increases made in dividends for the past year are regarded in the nature of victory bonuses to compensate in a small degree for the very limited extent to which the railways and their stockholders were permitted to benefit from the big expansion in traffics during the war.

Comparison with a week ago shows that Great Western has rallied from 54 to 54¼; there has been a sharp recovery from 107 to 110 in the 5 per cent. preference, and the guaranteed stock improved to 121, although the 4 per cent. debentures remained at 112. L.M.S.R. ordinary at 27½ was higher on balance, with the 1923 preference unchanged at 54 and the senior preference 75. L.N.E.R. second preferance strengthened at 29⅜, but the first preference eased slightly to 53. Elsewhere, Southern preferred at 72 regained an earlier small decline, while the deferred moved up from 21¼ to 22¼. London Transport "C" remained out of favour and declined from 59¼ to 58 on the fears that further large increases in wages would leave little scope for improved dividends.

Argentine rails were dull awaiting the full figures of the Presidential election, and small declines predominated; Buenos Ayres Great Southern were 10¼, compared with 10½ a week ago, the 5 per cent. preference 24¼ and the 4 per cent. debentures were 62½, as against 63¾. Buenos Ayres & Pacific consolidated debentures were lower at 58¾, also Buenos Ayres Western 4 per cent. debentures at 61 and Central Argentine 5 per cent. debentures at 62. United of Havana 1906 debentures hardened to 17, and Nitrate Rails shares were good at 81s. 3d. the latter on the expected big increase in demand for nitrate. Canadian Pacific at 25, however, again went back with other dollar stocks.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1944/5	No. of Week	Aggregate traffics to date: Totals 1945/6	Aggregate traffics to date: Totals 1944/5	Aggregate traffics to date: Increase or decrease	Shares or Stock	Prices: Highest 1945	Prices: Lowest 1945	Prices: Mar. 5 1946
				£	£		£	£	£				
South & Central America	Antofagasta	834	24.2.46	41,520	+ 2,560	8	257,340	249,020	+ 8,320	Ord. Stk.	12	8¾	9¾
	Arg. N.E.	753	23.2.46	ps.284,900	–ps., 10,600	34	ps.10,114,500	ps.10,091,900	+ ps. 22,600	,,	10	5¼	5¼
	Bolivar	174	Jan., 1946	4,826	– 817	4	4,826	5,043	– 817	6 p.c. Deb.	8½	5½	6½
	Brazil	—	—	—	—	—	—	—	—	Bonds	25	17	27½
	B.A. Pacific	2,771	23.2.46	ps.2,682,000	+ps.188,000	34	ps.75,704,000	ps.71,255,000	+ ps.4,449,000	Ord. Stk.	7	5	5½
	B.A.G.S.	5,080	23.2.46	ps.4,770,000	+ps.627,000	34	ps116 598 0 0	ps.110,928,000	+ ps.5,670,000	Ord. Stk.	13⅜	10½	10
	B.A. Western	1,924	23.2.46	ps.1,340,000	+ps. 45,000	34	ps. 40 991,000	ps.38 521,000	+ ps.2,470,000	,,	12⅜	9½	10
	Cent. Argentine	5,700	23.2.46	ps.3,435,000	+ ps.343,500	34	ps106,038,450	ps.97,954,750	+ ps.8,083,700	,,	9⅜	7	7
	Do.	—	—	—	—	—	—	—	—	Dfd.	5	2⅜	3½
	Cent. Uruguay	970	23.2.46	37,154	+ 2,688	34	1,319,127	1,148,889	+ 170,238	Ord. Stk.	7¼	4	8
	Costa Rica	262	Jan., 1946	25,528	– 28	30	195,192	146,887	+ 48,305	Stk.	16½	13	13½
	Dorada	70	Jan., 1946	31,749	– 179	4	31,749	31,928	– 179	1 Mt. Deb.	103	102	101½
	Entre Rios	808	23.2.46	ps.421,000	+ ps.23,600	34	ps 14,420,900	ps.13,474,400	+ ps.946,500	Ord. Stk.	7½	4½	6
	G.W. of Brazil	1,030	2.3.46	32,930	+ 5,100	9	290,100	251,900	+ 38,200	Ord. Stk.	30/–	23/6	23/9
	Inter. Ctl. Amer.	794	Jan., 1946	$1,024,547	+ $293,377	4	$1,024,547	$731,170	+ $293,377	—	—	—	—
	La Guaira	22¾	Feb., 1946	5,607	+ 584	8	12,429	10,517	+ 1,912	5 p.c. Deb.	78	70	62½
	Leopoldina	1,918	23.2.46	60,217	+ 14,440	8	446,766	355,997	+ 90,769	Ord. Stk.	4½	3½	3½
	Mexican	483	21.2.46	ps.900,100	+ps.294,200	8	ps. 5,904,600	ps. 4,500,500	+ ps. 1,404,100	Ord. Stk.	¼	¼	1½
	Midland Uruguay	319	Jan., 1946	1g. 31	– 976	29	13 .306	120,238	+ 14,068	—	—	—	—
	Nitrate	382	28.2.46	9,366	+ 4,233	8	37,157	22 202	+ 14,955	Ord. Sh.	75 6	67/6	78/9
	N.W. of Uruguay	113	Jan., 1946	5,359	+ 988	28	40,636	40,505	+ 131	—	—	—	—
	Paraguay Cent.	274	22.2.46	£50,095	– £4,969	34	£2,029,022	£2,010,312	+ £18,710	Pr. Li.Stk.	79½	77	75½
	Peru Corp.	1,059	Feb., 1946	138.395	+ 21,244	34	1,134,456	1,032,102	+ 102,354	Pref.	10⅜	7¾	10½
	Salvador	100	Dec., 1945	c 146,000	– c 2,000	24	c 613,000	c 558,000	+ c 55,000	—	—	—	—
	San Paulo	153½	—	—	—	—	—	—	—	Ord. Stk.	60¾	50½	55
	Taltal	156	Jan., 1946	3,655	+ 860	30	19,175	17,960	+ 1,215	Ord. Sh.	17/–	10/6	14/10½
	United of Havana	1,301	23.2.46	85,586	+ 15,305	34	1,642,236	1,713,421	– 71,185	Ord. Stk.	3	1	2
	Uruguay Northern	73	Jan., 1946	1,047	– 9	29	12,542	10,544	+ 1,998	—	—	—	—
Canada	Canadian National	23,569	Jan., 1946	6,180,200	– 333,400	4	6,180,200	6,513,600	– 333,400	—	—	—	—
	Canadian Pacific	17,037	28.2.46	1,243,600	– 39,000	8	9,181,600	9,449,800	– 268,200	Ord. Stk.	24	14⅜	25
Various	Barsi Light†	202	Jan., 1946	25,545	+ 5,677	41	247,567	222,982	+ 24,585	Ord. Stk.	131	123	117½
	Beira	204	Dec., 1945	68.507	– 2.346	12	205,253	236,186	– 20,933	—	—	—	—
	Egyptian Delta	607	22.2.46	18,343	– 2,696	39	514,206	570,041	– 55,83›	Prf. Sh.	10	8⅛	7½
	Manila	—	—	—	—	—	—	—	—	B. Deb.	71	55½	74
	Mid. of W. Australia	277	Jan., 1946	17,786	– 1,859	28	118,260	139,946	– 21,686	Inc. Deb.	97½	85	85
	Nigeria	1,900	24.11.45	92,839	– 6,266	34	1,944,202	2,199,250	– 255,048	—	—	—	—
	Rhodesia	2,445	Dec., 1945	501,079	– 1,998	12	1,518,568	1,562,110	– 43,542	—	—	—	—
	South African	13,301	26.1.46	1,052,106	+ 8,242	46	43,515,630	39,754,103	+ 3,761,527	—	—	—	—
	Victoria	4,774	Nov., 1945	1,252,024	– 55,618	—	—	—	—	—	—	—	—

† Receipts are calculated @ 1s. 6d. to the rupee